Registered at the G.P.O., Sydney, for Transmission by Post as a Newspaper. Published Weekly. Price 1s.

THE

MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—11TH YEAR. SYDNEY: SATURDAY, OCTOBER 18, 1924. No. 16.

THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—11TH YEAR. SYDNEY: SATURDAY, OCTOBER 18, 1924. No. 16.

Table of Contents

ORIGINAL ARTICLES— PAGE.

"Posterior Colpotomy," by H. C. E. DONOVAN, M.B., Ch.M. .. 389

"Thrombosis and Embolism," by J. MORTON, M.B., Ch.M. .. 390

"An Outdoor Ante-Natal Clinic," by H. A. RIDLER, M.B., Ch.M. .. 391

"The Clinical Utility of the Hellige Colorimeter," by A. T. R. ROBINSON, M.B., Ch.M. .. 397

REPORTS OF CASES—

"A Case of Doubtful Diagnosis, Probably Sternberg's Disease," by EUSTACE RUSSELL, M.B., Ch.B. .. 400

REVIEWS—

Neurological Diagnosis .. 402

The History of "Insulin" .. 402

LEADING ARTICLES—

The Infant Food Standards .. 403

CURRENT COMMENT— PAGE.

Changes in the Polarity of the Fœtus .. 404

ABSTRACTS FROM CURRENT MEDICAL LITERATURE—

Therapeutics .. 406

Urology .. 407

BRITISH MEDICAL ASSOCIATION NEWS—

Scientific .. 408

Medico-Political .. 410

BIRTHS, MARRIAGES AND DEATHS .. 412

MEDICAL APPOINTMENTS VACANT, ETC. .. 412

MEDICAL APPOINTMENTS: IMPORTANT NOTICE 412

DIARY FOR THE MONTH .. 412

EDITORIAL NOTICES .. 412

POSTERIOR COLPOTOMY.[1]

By H. C. E. DONOVAN, M.B., Ch.M. (Sydney),
Honorary Medical Officer, Women's Hospital, Crown Street, Sydney.

Indications.

THE indications for the performance of posterior colpotomy, otherwise known as vaginal cœliotomy, are:

(i.) Pelvic abscess, the result of puerperal or post abortional sepsis.

(ii.) Suppuration of the Fallopian tubes, gonorrhœal, mixed infections or streptococcal infections following abortion or confinement. In acute suppurative conditions of the tubes and in acute exacerbations of chronic infections the routine treatment should be palliative at first by rest in bed and the application of douches. If the temperature and pulse rate fall and remain normal for at least four or five days abdominal section should be performed. By that time the patient has developed sufficient antibodies to prevent the spread of infection to the general cavity of the peritoneum. If an abdominal operation is performed in the presence of a rapid pulse and a raised temperature, an unnecessary risk of fatal general peritonitis is incurred. If palliative treatment fails or if the temperature and pulse rate rise and signs of peritonitis increase, posterior colpotomy should be performed at once.

(iii.) Neglected pelvic appendiceal abscess.

(iv.) Infected pelvic hæmatocele.

(v.) Tuberculous disease of the tubes, provided the patient is hyperpyretic or otherwise in a good condition for abdominal section.

(vi.) Some parametric abscesses of the broad ligament are best reached by this route. In this case the peritoneum is not opened, the mucous membrane alone being cut and the finger worked round until the abscess cavity is reached.

(vii.) Abortion or puerperal sepsis in which there is no pelvic mass palpable, but the muscles are on guard and there are distension and definite signs of peritonism. In these cases colpotomy is an extremely valuable prophylactic measure. It is in this class of infection that curettage or digital removal of placental remains is dangerous. The uterus, however, may be gently explored and placenta removed, if at the same time the pouch of Douglas is drained.

Posterior colpotomy is a curative operation in certain conditions only. It is an extremely valuable life-saving measure in all the conditions indicated above. It is safe; it promotes drainage and

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on August 14, 1924.

relieves tension and is easy of performance. I have never regretted having done it, but have regretted delay in its performance. Prior thought that the packing of Douglas's pouch with iodoform gauze had a beneficial effect in uterine sepsis. Clinical evidence appears to bear this out.

It can be performed readily as an emergency operation under less ideal conditions than are necessary for abdominal section. It requires much less operative skill and less ideal surroundings. It could be readily performed in a private house in an emergency, more especially in the country, and the patient's life saved. The patient could later be transferred to hospital for abdominal section.

A fixed retroversion renders the operation much more difficult and dangerous.

Operative Technique.

The patient is placed in the lithotomy position. Vaginal douches are given and the vagina is scrubbed with cotton wool swabs held in a sponge holder. The swabs are soaked in a solution of "Lysol." A vaginal speculum is introduced and the posterior lip of the *cervix uteri* seized with a tenaculum and pulled down. A second tenaculum is fixed to the posterior vaginal wall about four to five centimetres (one and a half to two inches) from the cervix. This brings the reflexion of the vaginal mucous membrane from the cervix into prominence. The vaginal mucosa is cut transversely very close to the cervix. The finger is introduced and the connective tissue is cleared by blunt dissection with the finger. The peritoneum is seized by pressure forceps, a small fold is pulled down and cut with a knife or scissors. The small cut in the peritoneum is enlarged by passing a Howard Kelly forceps through it, opening the forceps and pulling it out. This opens a pelvic abscess or infected hæmatocele. The finger is introduced through the peritoneal opening and the tubes are palpated. If suppuration of a tube is detected, the tube is steadied by the left hand placed on the abdomen and the forefinger of the right hand by a boring movement is made to penetrate the cavity from below. The same procedure is adopted for the other tube if it is also the site of suppuration. Sometimes pus is encountered only in Douglas's pouch; sometimes only when one or other tube is opened as described. I have often obtained three distinct flows of pus, one from Douglas's pouch and one from each tube.

In peritoneal irritation without palpable tumour the same operation is performed, but, of course, no pus is encountered. The posterior surface of the uterus, however, and the tubes can be readily palpated. In tuberculous infections the peritoneum may be as thick as wash-leather and must be opened very cautiously, as coils of small intestine may be found adherent in Douglas's pouch. It may be difficult or impossible to define the layer of the peritoneum in the presence of a pelvic abscess in such case. After the vaginal mucous membrane is severed, a Hegar's dilator, Howard Kelly's forceps or a similar instrument is pushed into the abscess cavity through the peritoneum under the control of the hand placed on the abdominal wall above the pelvic mass. Finally drainage is established with iodoform gauze inserted freely into Douglas's pouch.

After Treatment.

The gauze is left in position for twenty-four to forty-eight hours, after which time, it is removed a little each day. The pulse rate is taken as the guide. If the pulse rate rises and remains high, the gauze must be removed and the colpotomy wound opened with the sponge holder forceps each day. If the pulse rate curve indicates a favourable course, the gauze need not be entirely removed for four, five or six days.

The safety of the operation is secured by working accurately in the middle line and as closely as possible to the posterior surface of the uterus and by using blunt instruments or the fingers for opening and draining pus cavities. Hæmorrhage is never serious.

The operation is slightly different for the relief of abscess of the broad ligament pointing toward the vagina. The vaginal mucosa is opened as described. The finger is inserted and worked round laterally toward the point of greatest swelling until the abscess is reached and a gauze drain inserted. The peritoneum, of course, is not opened.

If the condition is a pelvic abscess without suppurative involvement of the Fallopian tubes, this operation will probably effect a cure. If the tubes have been felt by the finger to be involved to a considerable extent, abdominal section will probably be necessary at a later date. I have treated several patients in whom suppurative conditions of the tubes were present, without abdominal section and have obtained clinical cures. This is unusual.

The question arises as to the best time to perform abdominal section. It should not be carried out until the temperature and pulse rate have been normal for at least five to seven days. It must not be delayed too long. If performed early the adhesions of the tube to the rectum, the uterus and the walls of Douglas's pouch are comparatively easily dealt with. If delayed for some months dense adhesions will probably be encountered and the operation for the removal of the tubes will be very difficult indeed.

Posterior colpotomy is also very useful from the establishment of drainage in abdominal section for any septic condition in the pelvis in which drainage is indicated.

THROMBOSIS AND EMBOLISM.[1]

By J. MORTON, M.B., Ch.M. (Sydney),
Honorary Medical Officer, Women's Hospital, Crown Street, Sydney.

A RECENT discussion on the subject of thrombosis and embolism, reported in *The British Medical Journal* of April 19, 1924, prompted me to make some remarks on the case of a patient who had a thrombosis of the veins of the leg.

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on August 14, 1924.

Thrombosis and embolism are undoubtedly much more common in puerperal and gynæcological practice than in other branches of medical or surgical work. None of the many causes mentioned seem quite to explain this fact. Sepsis, anæmia, circulatory stagnation, toxæmia, proximity of venous plexuses are all important factors. But we may have all these in surgical conditions and seldom see thrombosis.

My own view is that the special factor in puerperal and gynæcological affections is the streptococcus which is known to inhabit the female genital tract. This, I believe, is the essential element in the great majority of cases, not only of thrombosis and embolism, but also of puerperal sepsis of all degrees of virulence. That is to say a localized thrombosis and virulent septicæmia may be essentially the same disease under different conditions of resistance on the part of the patient.

When I say that the streptococcus is the essential factor, I do not mean to detract from the importance of the predisposing or subsidiary factors. That circulatory stagnation is an important predisposing cause of pulmonary embolism is strongly supported by the figures quoted by Professor Glyn.[1] At the Liverpool Royal Infirmary from 1905 to 1915 there were nine necropsies on the bodies of patients from the gynæcological wards who had died of post-operative pulmonary thrombosis, seven from the surgical wards and three from the medical wards. From 1916 to 1923 there were two from the gynæcological ward, six from the surgical wards and three from medical wards. The diminution in the number of patients from the gynæcological wards coincided with the introduction of systematic deep breathing and active arm exercises practised every morning from the third or fourth day after a major operation. No exercises were practised in the rest of the hospital.

In typhoid fever again, the combination of infection and blood stasis is well exemplified in the production of thrombosis.

Anæmia from loss of blood is also important as a predisposing factor. It favours coagulation and retardation of the blood current. It is commonly present in those patients who are prone to thrombosis, that is those who are attacked by *post partum* hæmorrhage and those who suffer from fibroids with bleeding.

But with these and the other causes mentioned there is nearly always available some evidence of infection, without which, I think, thrombosis does not occur.

The question may be asked: Why blame the streptococcus especially? The chief reason is that it is the organism found in the blood in the great majority of patients with puerperal sepsis from whom a culture is obtained. It is also commonly found in the thrombi. Its abiding presence in the genital passages and perineum makes it a likely cause of trouble should an opportunity occur.

Dr. Leith Murrary states that organisms had been grown from the blood in 46% of a series of one hundred and ninety-six patients with sepsis; of these 93% were streptococcal.[2] Dr. M. J. Cohen investigated twenty-two cases of thrombosis.[3] In eighteen bacteria were found in the systemic or pulmonary clots and in eleven streptococci were prominent. He says that sepsis is the main factor in pulmonary thrombosis. The place of origin of the sepsis is not stated.

The occurrence of phlegmasia after hysterectomy is to be explained, I believe, by streptococcal infection from the cervical canal or vagina. Without preliminary disinfection of these parts it is practically impossible to avoid wound contamination when cutting through the cervix or vagina. In such an operation I consider that a most important part of the technique is to pack the uterus with a strip of iodoform gauze saturated with tincture of iodine and to swab the vagina freely with the same solution before proceeding to open the abdomen.

To sum up, I think the essential factor in puerperal or gynæcological thrombosis is infection with a non-hæmolytic streptococcus derived from the genital tract and that without such infection thrombosis will not occur even though other predisposing factors are present.

References.

(1) Ernest Glyn: *The British Medical Journal*, February 23, 1924, page 323.

(2) H. Leith Murrary: "Serums and Vaccines in the Treatment of Puerperal Infections," *The British Medical Journal*, April 21, 1920, page 269.

(3) M. J. Cohen: *The British Medical Journal*, April 19, 1924, page 714.

AN OUTDOOR ANTE-NATAL CLINIC.

By H. A. Ridler, M.B., Ch.M. (Sydney),

Honorary Assistant Surgeon, Royal Hospital for Women, Paddington, and Women's Hospital, Crown Street, Sydney.

During the last five years, I have had the opportunity of carrying out ante-natal work for a large number of patients at the Royal Hospital, Paddington, and the Women's Hospital, Crown Street, and the subject matter of this paper has been obtained from my experiences at these hospitals.

In the attempt to reduce still births and maternal mortality ante-natal examination and treatment of the expectant mother are essential.

Both hospitals have an outdoor and indoor prematernity department. I had sole charge of the outdoor department at the Royal Hospital and my figures refer to this department alone. About one thousand individual patients visit this department in each year.

This department was open one afternoon a week. It is very difficult to get the expectant mother to present herself for examination during pregnancy. She considers that it is a normal event for her to have a baby and all that she considers necessary is to know the day or "the exact day" the baby is to arrive and that is a thing we cannot definitely ascertain. Yet so many expect us to be able to do so, even if they have no dates which may serve as

a guide. Many have large families at home to look after and a meal to cook when they return home. They are not invalids like other hospital patients. Hence under these conditions if we wish such people to attend the departments regularly, it is always necessary to start punctually at the same time each day and to dismiss them as quickly as possible.

The following are some of the reasons given by the patients for having presented themselves: Some wish to know the day the baby should arrive. This is what the majority want (quite a number consider the pregnancy is further advanced than it really is). A number of patients have not menstruated since the last child was born and have become pregnant again. Others complain of various pains and aches, such as headache, backache, pains in the iliac region. They may complain of faint turns, vomiting, constipation, inability to sleep, frequent micturition, inability to hold urine. Some who have had eclampsia with the last pregnancy or albuminuria, wish to know if the urine is all right. Some complain of something coming down (either prolapse or varicose veins of the vulva). Some want a live baby as they have had frequent miscarriages or still births, or they wish to know if the baby is all right. Others have not felt movements or movements had ceased. Some wish to know whether they are pregnant (all sorts of cases), some complain of bleeding and others thought they were over their time. A few were sent by other medical men or were referred on from the hospital office as a routine measure. Other causes for complaint were: varicose veins, hernia, enlarged Bartholin's glands, troubles at previous confinements, such as instrumental deliveries, still births, Cæsarean section, *ante-partum* hæmorrhage. Some wish to know whether they are all right after abdominal section and others complain of discharge and irritation.

Routine Adopted at Clinic.

The routine with each patient consisted first in taking a careful history on a printed form and the general appearance, height and so forth were noted as she walked in and out of the record room. This history may be very useful, for example in regard to the number of miscarriages, still births, previous confinements and their nature. At the same time the patient is asked if she has brought a specimen of her urine for examination. The important point about bringing the urine is, if possible, to educate the women up to the fact that their urine should be examined regularly during pregnancy. I found towards the end of my term of office that it could be done. Moreover, the time taken for a nurse to collect in some receptacle a specimen of urine from such a large number of patients means the loss of a considerable amount of time which can be avoided. The urine of the patient is examined by the nurse before the patient's history is taken and the result is noted by her. The importance of the examination of the urine is evidenced in the report of the Committee appointed by the Scottish Board of Health which was published in *The British Medical Journal* of May 31, 1924. It was stated in that report that the greatest cause of maternal deaths from 1911 to 1922 was sepsis, then came albuminuria and convulsions.

The patient's urine was examined once a month till the seventh month and after that every two weeks in a normal pregnancy. If the patient's symptoms or the findings on examination of the urine, such as the presence of a faint cloud of albumin, suggested it, the urine was examined as frequently as deemed necessary. A patient with a heavy cloud of albumin was always advised to enter hospital. I found that the amount of albumin in urine can increase very rapidly within two or three days. Another type of case is that of the patient with swelling and no albumin in the urine. I have been taught that that is often due to pressure. I found in these cases, especially when the swelling developed early in pregnancy and there was no albuminuria, that in the later period of pregnancy albumin was very frequently present. Urine testing entails much work, but it well repays the time spent in doing it, as any report on the causes of maternal morbidity and still birth shows.

A number of histories are taken. The patients are then examined, there being a sister in charge and two, generally four, nurses available and two examination tables. After each examination the findings are written down. Such examination consists of inspection of the lower part of the thorax and abdomen, abdominal palpation, auscultation of fœtal heart, if necessary, vaginal examination, if necessary, and an examination of any other system suggested by the history and symptoms. A vaginal examination is not a routine procedure in every case, although perhaps desirable. In some cases it is quite unnecessary.

With regard to failing to detect a contracted outlet owing to the omission of a vaginal examination there has recently been a discussion in *The British Medical Journal* between Drs. Gibbon Fitzgibbon and Blair Bell. I quite agree with Dr. Fitzgibbon.

I would strongly advise those interested in contracted pelvis to read carefully "Three Lectures on Contracted Pelves" delivered in the University of London by Gibbon Fitzgibbon, Master, Rotunda Hospital.

Measurements with a pelvimeter as a routine were not made in my work.

Gibbon Fitzgibbon states:

> The only means of making a positive diagnosis is by taking measurements of the pelvis. To obtain the degree and type of contraction it is necessary to take internal measurements. Even these are not sufficient for the management of the case as the clinical question of contraction is really one of relative proportions and dependant upon the capability of the pelvis to allow the individual fœtus to pass through. This can only be decided in the majority of cases by a trial labour.

It is impossible to take internal measurements in an out-patients' department; the relative size of the head to the pelvis can be gauged and is a most important factor.

Normal patients report once a month and bring their urine till the seventh month. After this they

bring it every two weeks till confined or they enter the indoor pre-maternity department which is mainly a waiting home, especially for those patients living at a distance and single women. A final examination is always made two weeks before the estimated date of labour. Any patient requiring indoor treatment was admitted to the wards, not the indoor pre-maternity department, also any patient in regard to whose condition I thought a second opinion was advisable.

I found it impossible to induce patients with decayed teeth (and there were numbers of such patients) to get them attended to while pregnant.

The following card is handed to each patient:

ROYAL HOSPITAL FOR WOMEN, PADDINGTON.

Pre-Maternity Department.

Instructions for Patients During Pregnancy.

These instructions are issued for your own benefit and you are requested to follow them in order that your pregnancy and confinement may be quite natural. If anything is at fault, steps can be taken to rectify it when you see the doctor before confinement.

1. Take a moderate amount of outdoor exercise daily.
2. See that the bowels are moved daily.
3. Report yourself at the Out-patients' Department on a Thursday afternoon at 2 p.m., about four weeks before the expected date of confinement and bring with you an ordinary medicine bottle of urine.
4. Report yourself at the hospital at any time if any of the following symptoms occur:
   - Loss of blood.
   - Severe and constant headache.
   - Scanty urine.
   - Dimness of vision.
   - Swelling of feet and face.
   - Persistent constipation.
   - Also when you feel that anything is not as it should be.

RESULTS OF OBSERVATIONS.

The following tables and results are taken from the patients who attended in 1922. The indoor charts for 1923 were not available at the time I started this article.

Total number of patients	999
Total number of visits	1,771
Primiparæ	352
Multiparæ	517
Patients who thought they were pregnant and were not	49

Of the remaining eighty-one a few were gynæcological and post-maternity patients. The outdoor charts of the others were not to be found.

The following table denotes the period of pregnancy at which the patients first presented themselves.

Period of Pregnancy.	*Primiparæ.*	*Multiparæ.*
6 weeks	3	7
2 months	11	47
3 months	15	37
4 months	26	48
5 months	32	50
6 months	71	113
7 months	112	101
8 months	66	95
9 months	15	18
In labour	1	0
Post-mature	0	1

The number of patients who were considered normal when examined in the outdoor pre-maternity department and who subsequently were confined in a normal manner with a living child in the wards, was: *Primiparæ*, 165; *multiparæ*, 201.

The number of patients who were considered normal when examined in the outdoor pre-maternity department and of whom there was no record of confinement in hospital, was: *Primiparæ*, 109; *multiparæ*, 249.

The patients who suffered from abnormalities may be divided into two groups.

Group I.

The patients in Group I. comprise those in whom abnormalities were detected in the out-patients' department.

Contracted Pelvis.

The patients with a contracted pelvis who presented themselves at the outdoor deparment were as follows:

1. A *primipara*, aged twenty-six years, was sent into hospital seventeen days before labour started. She was given a trial labour and Cæsarean section was performed. Mother and child lived.
2. A *primipara*, single, aged nineteen years, was sent into the indoor pre-maternity department. A trial labour was given at term and section was performed. Mother and child lived.
3. A *multipara*, aged thirty-two years, stated that the first child was born without any trouble, but died when six weeks old. The patient had been delivered of the second child with instruments, of the third by craniotomy and the fourth by Cæsarean section. This child was alive. During her fifth pregnancy the patient attended the out-patient department and subsequently Cæsarean section was performed and sterilization carried out. Mother and child lived.
4. A *primipara* seven days before the estimated date was confined normally of an infant weighing 2.9 kilograms (six and a half pounds) after sixteen hours in labour (*justo minor* pelvis).
5. A *primipara*, aged twenty-five years, refused to be examined at the out-patient department. She went into the indoor pre-maternity department and was affected by albuminuria there. Section was performed at term. Mother and child lived. (Flat pelvis.)
6. A *multipara*, aged twenty-six years, had been delivered of two still-born children by instruments. Section was carried out when the patient came into labour. Mother and child lived.
7. A *multipara*, aged twenty-nine years, had been delivered of two children by instruments. She delivered herself normally of a living child weighing 2.5 kilograms (five and three-quarter pounds), labour being induced.
8. A *multipara* had two still-born children. When pregnant at eight months with the fœtus in the transverse position the patient would not come into hospital. She was confined by the district nurses of the Royal Hospital. Birth was by the breech and the child lived. Next year, 1923, the patient was admitted early in the first stage of labour, with the child in the transverse position. Internal version was done and the child was still-born.

9. A *primipara*, aged forty years, was sent into the indoor pre-maternity department and after consultation with Dr. J. C. Windeyer I did a section several hours after labour commenced. Mother and child lived.

10. A *multipara*, aged twenty-nine years, had had three previous children. In the first instance a Cæsarean section was carried out for supposed contracted pelvis, the second was a normal birth and the third a breech presentation with a still-born child. This time the patient had normal labour and living child.

Albuminuria.

The following patients became affected by albuminuria while attending the out-patients' department:

A *primipara*, aged thirty-seven years, on one occasion near full term passed urine in which a faint cloud of albumin was present. No record of confinement in hospital is to be found.

A *primipara* was affected by albuminuria at the eighth month. The confinement was normal and the child lived.

A *primipara*, aged twenty-eight years, near term passed urine containing "one-third albumin." She was admitted to hospital. The confinement was normal and the child lived.

A *primipara* at six and a half months was affected by slight albuminuria. No record of confinement is to be found.

A *multipara*, aged thirty-five years, was found on one occasion at eight months to be suffering from albuminuria. No record of confinement is to be found.

A *primipara*, aged twenty years, passed urine which on examination contained a heavy cloud of albumin. Labour was normal and the child lived.

A *primipara* on term passed urine which was found to contain a heavy cloud of albumin. Confinement was normal and the child lived.

A *primipara* at five months was affected by slight albuminuria. No record of confinement is to be found.

A *multipara* had albuminuria estimated at one-half and three weeks later had a normal confinement and a living child.

A *multipara* at eight and a half months pased urine which contained a heavy cloud of albumin. The confinement was normal and the child lived.

A *primipara* on term passed urine containing albumin. She had much œdema for the last three months of pregnancy and no albumin in the urine which was tested every two weeks during that period. On returning seven days after the last examination at which the urine had contained no albumin, the urine contained "three-quarters" albumin. She was confined of a living child by instrumental delivery, the position was left occipito-posterior and the fœtus required manual rotation.

A *primipara* at seven and a half months passed urine with a trace of albumin. The confinement was normal and the child lived.

A *multipara* at seven months passed urine containing "half" albumin. She was admitted to hospital, but the albumin increased in spite of treatment. Labour was induced and a 1.5 kilogram (three and a half pounds) baby was born, which died when eleven days old.

A *multipara* at eight months was affected by slight albuminuria, she did not return to out-patients' department. No record of confinement in hospital is to be found.

A *primipara* at six months was affected by slight albuminuria. She did not return to the out-patients' department. No record of confinement in hospital is to be found.

A *multipara* at five months was affected by albuminuria. She did not return for two months and then the cloud of albumin was faint. The following week there was no albuminuria. She attended regularly till within eighteen days of the estimated date of labour and continued to have a faint cloud of albumin. The patient had had four previous children and according to her, labour had been induced for three of them on account of fits. There is no record of a confinement in the hospital.

A *primipara* at five months passed urine containing a heavy cloud of albumin. She was admitted to hospital. The albuminuria disappeared. The patient did not return to the out-patients' department and no record of confinement in hospital is to be found.

A *primipara* at six months was affected by albuminuria which disappeared and reappeared frequently till term. The confinement was normal and the child lived.

A *multipara* at six months, the patient's first visit, had a heavy cloud of albumin. She was admitted, but had a miscarriage. At the previous and first confinement the patient had had albuminuria and was delivered of premature twins at seven months. The twins died. Since these two pregnancies the patient has had a living full time child and had no albuminuria during the pregnancy.

A *primipara*, aged twenty-one years, at eight months was affected by albuminuria. She did not return to out-patients' department. No record of confinement in hospital is to be found.

A *multipara*, aged twenty-eight years, at eight months was found on one occasion to have passed urine containing a trace of albumin. Confinement was normal and the child lived. With three other pregnancies the patient had albuminuria and one child was still-born at seven months.

A *multipara*, aged twenty-three years, at eight months passed urine containing a heavy cloud of albumin, no albumin was present one week later. Confinement was normal and the child lived. The patient had eclampsia with the first and only other confinement.

A *multipara*, aged thirty-nine years, became affected by albuminuria and was confined five days later of twins. One was living and weighed two kilograms (four and a half pounds), the other was macerated and weighed 1.4 kilograms (three and one-quarter pounds). There was no albumin in the urine at the time of confinement.

A *primipara*, aged twenty-six years, at eight and a half months was first affected by albuminuria. She had reported at six months with swollen legs, but no albumin had been present. The confinement was normal and the child lived.

A *multipara*, aged thirty-three years, at eight months was found on one occasion to be passing urine containing a cloud of albumin. No record of confinement in hospital is to be found.

A *primipara*, aged thirty-three years, at eight months was found on one occasion to be passing urine containing a cloud of albumin. The confinement was normal and the child lived.

A *primipara*, aged thirty-seven years, at eight months became affected by albuminuria. The confinement was normal and the child lived.

A *primipara*, aged thirty-four years, at eight months became affected by albuminuria and was admitted to hospital. No albumin was present two weeks later. She did not return to the out-patients' department again. No record of confinement in hospital is to be found.

A *primipara*, aged twenty-one years, at seven months passed urine containing a heavy cloud of albumin. She was admitted to hospital and the albumin increased and the patient eventually had a normal confinement and a living child.

A *primipara*, aged nineteen years, at seven months passed urine containing a very heavy cloud of albumin. She was admitted and at term had a normal confinement and a living child.

A *multipara*, aged thirty-five years, at seven and a half months became affected by albuminuria. This cleared up the following week, a living child was born at confinement, but instrumental delivery was necessary owing to delay in the second stage. No albumin was present at confinement.

A *multipara*, aged thirty-seven years, at six months became affected by albuminuria. She was admitted to hospital and the albuminuria cleared up. She reported twice to out-patients' department afterwards, no albumin was present and no record of confinement in hospital is to be found.

A *primipara*, aged twenty-nine years, at eight months passed urine containing a faint cloud of albumin and had some hæmorrhage, no *placenta pravia* was detected, no albumin was present and no bleeding occurred during the following week and none two weeks later. No record of confinement in hospital is to be found.

A *multipara*, aged twenty-six years, had three children. At eight months she became affected by albuminuria and

was recommended for admission. She would not go in and no record of confinement in hospital is to be found.

A *multipara*, aged twenty-three years, passed urine containing a trace of albumin three weeks before the estimated date of labour. No albumin was present two weeks later, confinement was normal and the child lived.

A *multipara*, aged thirty-two years, had eclampsia with first and previous confinement. With this pregnancy albuminuria appeared at six months. Two weeks later no albumin was present. Albuminuria reappeared at seven months, it cleared up again and did not recur. Confinement was normal and the child lived.

The cases in which albumin first appeared in the urine, may be summarized in regard to time as follows:

Period of Pregnancy.	*Primiparæ.*	*Multiparæ.*
Fifth month.. ..	2	1
Sixth month.. ..	2	3
Seventh month ..	3	1
Eighth month ..	8	7
Near term	3	3
At term	2	1

Instrumental Delivery.

The patients who attended the out-patients' department and subsequently required instrumental delivery at confinement in hospital, may be summarized as follows:

Primiparæ 29, *multiparæ* 7.

Of these a delayed second stage was the cause in fifteen *primiparæ* and in seven *multiparæ*. One *primipara*, aged thirty-two years and single, was delivered of a still-born infant.

Occipito-posterior positions required manual rotation and delivery with instruments in eleven *primiparæ*. Of these one had eclampsia (see later note), one had a still-born infant, in one the confinement was three weeks after the estimated date and the infant weighed four kilograms (nine pounds), one patient was admitted in labour with albuminuria (see later note).

A vertex in the right occipito-posterior position became self-rotated in one *primipara* and delivery with instruments was carried out.

A vertex in the left occipito-posterior position became self-rotated in one *primipara* and delivery with instruments was carried out.

A *primipara* was admitted with a dead baby and prolapsed cord and was delivered with instruments.

Ante-Partum Hæmorrhage.

The following patients with *ante-partum* hæmorrhages were treated.

A *multipara* with two children suffered from bleeding at six months, no placenta was felt. Confinement at term was normal and the child lived.

A *multipara* had a miscarriage at three months, the second pregnancy ended in premature labour at seven months and the child was still-born, the third pregnancy terminated in a miscarriage at four months. The serum failed to react to the Wassermann test. At five and six months during the fourth pregnancy hæmorrhage occurred. Confinement at term was normal and there was a healthy living child.

A *primipara* had hæmorrhage at seven month, no placenta was felt. The patient had been douching herself. No record of confinement was found.

A *multipara* with one child had hæmorrhage at seven months. No placenta was felt. No record of confinement was found.

A *multipara* with six children had hæmorrhage at seven months. No placenta was felt. She went to term, the confinement was normal and the child lived.

A *multipara* with one child had bleeding at two months. The uterus was retroverted, it was replaced and a pessary was put in. The pessary was removed at four months. Hæmorrhage had occurred at seven months, the patient went to term, confinement was normal and the child lived.

A *multipara* had had one still-born child. At eight months hæmorrhage occurred. No record of confinement in hospital was found.

A *multipara* with one child had hæmorrhage three weeks before confinement. No cause could be ascertained. Confinement was normal and the child lived.

A *multipara* with three children had hæmorrhage at eight months. No cause was found. Four days later labour occurred. Confinement was normal. The child weighed two kilograms (four and a half pounds) and died next day.

Retroverted Pregnant Uterus.

The patients with retroverted pregnant uterus numbered eight. They were treated with pessary after replacement. Three did not return; the other five went on satisfactorily.

Prolapse of pregnant uterus at two to three months occurred in three instances. One patient was treated with pessary and had a normal confinement, the other two did not report again. Another at six months only reported once.

Heart Conditions.

The following patients with cardiac conditions came under treatment:

A *multipara*, aged thirty-eight years, had had three children. After these she had four inductions at various places in early months of pregnancy for mitral stenosis. The patient went to term on this occasion, had normal labour without any embarrassment. I accidentally saw this patient since; labour had recently been induced by someone else.

A *multipara* with eight children was forty-four years of age. She had had several attacks of rheumatic fever and had rheumatic endocarditis and myocarditis (?). She was only seen once just before term. She had a rapid pulse, faint "turns" and vomiting and was admitted to the wards. After a week's rest in bed she came into labour. The confinement was normal and easy. The child lived.

Post-Maturity.

There were six possible cases of post-maturity. Three confinements occurred three weeks after the estimated date, but were normal. One is mentioned as an occipito-posterior case among the instrumental deliveries. Another patient did not come into hospital. In the last labour was induced and the patient had a child weighing 4.4 kilograms (nine and three-quarter pounds).

Pulmonary Tuberculosis.

The following patients with pulmonary tuberculosis were seen:

A *multipara*, aged twenty-three years, had one child. Confinement and puerperium were normal.

A *multipara* with four children had labour induced at three months. Labour had been induced once before.

Uterine Fibroids.

The following patients with uterine fibroids were seen:

A *primipara*, aged thirty-nine years, had a normal confinement and living child weighing 2.2 kilograms (five pounds).

A *multipara*, aged thirty-six years, had one child thirteen years ago. She had a fibroid the size of a six months' pregnancy, but was not pregnant.

A *multipara*, aged thirty-three years, had fibroids and a threatened miscarriage at four to five months. She would not come into hospital and no further record was found.

Hydramnios.

The following patients with hydramnios were seen:

A *multipara* had one child still-born due to eclampsia. At end of six months in the next pregnancy she became suddenly very big and was sent into the wards. A few hours after admission the membranes ruptured and twins weighing 0.48 and 0.45 kilograms (one and a quarter and one pound) were still-born. The abdomen was the size of a full-time pregnancy and this enlargement had occurred in two weeks.

A *multipara*, aged thirty-three years, had two children. She reported once only at eight months. At the time she had hydramnios, but was not confined till two months later. She had hydramnios and an anencephalitic monster.

A *multipara* with one child was three months pregnant and had an ovarian cyst. She did not return and no record of confinement is to be found.

Threatened Abortion and Miscarriage.

Threatened abortions and miscarriages occurred in twenty-seven patients. Missed miscarriage occurred in one *multipara*, aged thirty-four years, with two children. Induction of labour was carried out after the patient had been kept under observation for two months in the out-patients' department.

Syphilis.

One patient had still-births at six and a half, seven and a half and six months and was treated for syphilis at Sydney Hospital. She had a normal confinement and living healthy infant at term.

The Wassermann test was done on three patients whose serum failed to yield a reaction. Two others were sent for the test, but disappeared.

Pyelitis.

A *multipara* who had two children, suffered from pyelitis at eight months. The confinement was normal and the child lived.

Group II.

Group II. comprises patients seen at the out-patients' department who were normal or in whom no abnormalities were detected at the time, but who had some abnormality later on in pregnancy or at confinement.

Eclampsia.

A *primipara*, single, aged seventeen years, came at five months to know if she was pregnant. She did not return to the out-patients' department again. She was admitted in labour at term with eclampsia. She was delivered with instruments, the child being in the right occipito-posterior position and rotated manually. Mother and child lived.

Ante-Partum Hæmorrhage.

A *primipara*, aged twenty-three years, reported once only at five months. No albumin was found in the urine. Ten weeks later she was admitted with revealed accidental hæmorrhage and with urine containing "one-third" albumin. Podallic version was done and the baby, weighing 1.8 kilograms (three and three-quarter pounds), was still-born. The urine was clear in one week and the mother recovered.

Albuminuria.

A *primipara* reported at five and six months, no albumin was present and she did not return to out-patients' department. Two months after the last visit she was admitted to hospital passing urine which contained "three-quarters" albumin. Four days after admission the labour started. The confinement was normal and the child lived.

A *primipara*, aged thirty-four years, reported first at seven months with vomiting. She attended for three consecutive weeks and had no albuminuria. She did not return again to the out-patients' department. She was admitted to hospital a day before the onset of labour passing urine which contained a "fifth" albumin. The confinement was normal and the child lived.

A *primipara*, single, aged twenty-one years, went into the indoor pre-maternity department the same day as attending the outdoor department. Four weeks later she became affected by albuminuria and the amount of albumin afterwards increased to "one-half." The confinement was normal and the child lived.

A *primipara*, aged twenty-eight years, was seen regularly six times from the sixth to the eighth month, she had no albuminuria. Three days after her last visit she went to a doctor in private practice who found a cloud of albumin and sent her into hospital. Albuminuria continued till the time of confinement. This patient had swollen legs from the sixth month onward. The confinement was normal and the child lived.

A *primipara*, aged twenty-one years, had no albuminuria while attending the out-patients' department. Two days after her last visit she was admitted in labour and was passing urine which contained a cloud of albumin. Delivery was instrumental on account of a delayed second stage. The child lived.

A *primipara* reported once at seven months. Three weeks before term she was affected by albuminuria. Confinement was normal and the child lived.

A *multipara* came once to the out-patients' department at four months. She passed albumin in the urine four days before confinement which was normal. The child lived.

Macerated Fœtus.

The following patients gave birth to macerated fœtus:

A *primipara* was seen once only at seven months. She had no albuminuria, but complained of indigestion and constipation. Seventeen days later she gave birth to a macerated fœtus weighing 1.5 kilograms (three and a half pounds).

A *primipara*, aged twenty-one years, was seen at seven months only. She did not return. At term she had a macerated fœtus.

A *multipara* with one child was seen at six months only. She did not return and at term had a macerated fœtus. The serum did not react to the Wassermann test.

Still-Born Infants.

The following patients gave birth to still-born infants:

A *multipara* with three children was admitted with a prolapsed cord.

Two *primiparæ* were admitted with prolapsed cord and replacement failed. Presentation was by the breech.

A *multipara* with five children was admitted with prolapsed cord. Presentation was by the breech.

A *primipara* reported at four months only. She was admitted with a prolapsed cord, delivery was instrumental. The cord was not pulsating on admission.

A *primipara*, aged twenty-three years, was admitted with a breech presentation. The child was still-born.

Pyelitis.

The following patients suffered from pyelitis:

A *primipara*, aged thirty-three years, was affected by pyelitis three weeks after she was last seen at the out-patients' department at the seventh month. The confinement was normal and the child lived.

A *multipara* with three children was affected with pyelitis three weeks after she was last seen at the out-patients' department at the eighth month. Confinement was normal and the child lived.

Conclusion.

There were no maternal deaths.

The number of still-born infants, ten, have already been described.

Macerated fœtus numbered four and have already been described.

The number of patients who miscarried, as some certainly would, cannot be traced.

If any case of contracted pelvis was missed in the out-patients' department, there was no clinical evidence of such at confinement in the hospital.

In reference to those patients who had breech presentations and still-born infants, it might reasonably be asked why was not the position of the child changed? In a number of cases in which I have changed a breech into a vertex presentation, I have not always had a successful result. To give an example of one case: A *multipara* one month post-mature had a breech presentation and a fœtus with a very big head. The position was changed into a vertex, the patient came into very strong labour. The membranes ruptured and the cord came into the vagina. Version was done immediately, but by the time the patient was anæsthetized, the cord had ceased pulsation. The delivery of the after coming head was remarkably easy and quick, but the result was a still-born infant. Case 8 in the contracted pelvis series may also be noted. I know that other men have had similar results after changing the position.

Find out the cause of the breech presentation and treat that, if you can.

THE CLINICAL UTILITY OF THE HELLIGE COLORIMETER.

By A. T. R. Robinson, M.B., Ch.M. (Sydney), *Roseville, Sydney.*

The following notes on the clinical uses of Hellige's colorimeter are offered in the hope that these simple analyses may become more widely known and practised.

Blood Sugar.

Hellige's colorimeter may be employed for the purpose of determining the amount of glucose in blood. The method is reasonably accurate for clinical purposes and does not entail the use of extreme exactness in the weighing of chemicals, except for the preparation of the glucose solution. Titration methods are avoided and expensive gear is not needed. It is essentially useful for the general practitioner without previous experience in bio-chemistry and with poor laboratory facilities, as exists in country districts.

The Principle of the Method.

The proteins of blood are precipitated by heat with the addition of dilute acetic acid and sodium chloride solution. They are then filtered and the filtrate is evaporated to dryness; a strongly alkaline solution of copper sulphate and potassium

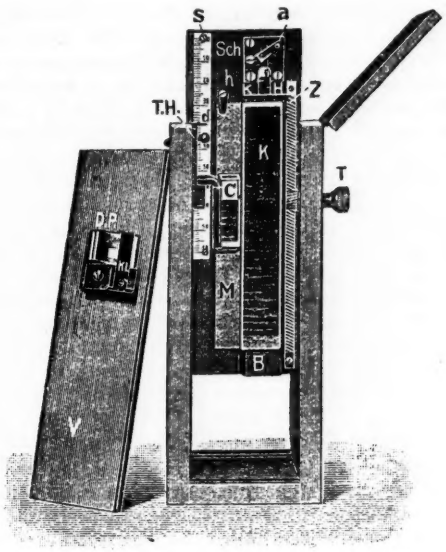

Figure I.—Hellige's Colorimeter.
D.P. = double plate; V. = front panel; Sch. = sliding back panel; K. = wedge; C. = trough; S. = scale; T. = pinion.

thiocyonide is added; the mixture is then boiled, cooled and compared with a coloured standard solution in a colorimeter.

Apparatus Required.

The apparatus required is as follows:

(i.) Six small beakers to hold about fifty cubic centimetres of fluid each.

(ii.) A small *casserole* evaporating dish with cover to hold about one hundred cubic centimetres of fluid.

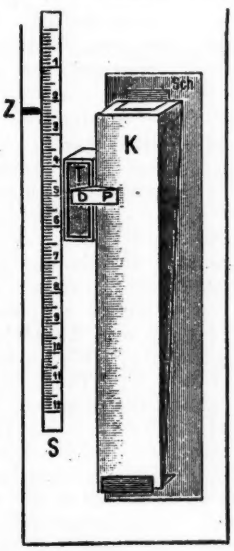

Figure II.
Hellige's Colorimeter.
View of wedge, trough and scale with double plate.

(iii.) A twenty-five and a fifty cubic centimetre graduated measure.

(iv.) A litre graduated measure.

(v.) One five cubic centimetre pipette, one one cubic centimetre pipette and one two cubic centimetre pipette to deliver blood.

(vi.) A Hellige's colorimeter.

Hellige's Colorimeter.

Hellige's colorimeter is an instrument that may be bought for about five pounds sterling at H. B. Selby and Company, Limited. I have found the results very accurate, there being little variation in the readings.

The apparatus consists of a box or housing with a rack and pinion arrangement. The front of the box is removable and bears on the outside a small observation window, behind which is a Helmholtz double plate. On the inside of the box is a sliding panel moved by a rack and pinion arrangement. This carries the important part of the colorimeter, the wedge in which is placed the standard solution with which to compare the unknown solution. On the left is a scale moving up and down in front of a fixed indicator. The perforated back of the instrument is surrounded by a rounded opal glass. The fluid to be tested, that is the unknown solution, is poured into a small trough which hangs fixed in a slot at the side of the wedge. The wedge should be adjusted to slide past the trough, so that there is not more than a thin space between the fields of vision. When the reading is being made, diffuse daylight will be found to give the best similitude of colour, although with practice artificial light yields good results.

The wedge is ten centimetres in height and its base measures 12.5 millimetres in width and the same in depth. The cup or trough is approximately the same thickness as the thickest part of the wedge. As the wedge is moved downwards past the viewing aperture, the colour deepens and as it is moved upwards, it becomes paler. In the estimation of the depth of colour the standard solution is matched with that of the fluid to be tested. The colour of the standard solution depends on the thickness of the wedge and the accuracy of the observations will depend on the care with which it is calibrated. If the same solution be placed in the wedge and in the cup or trough and the wedge be moved until the two fields possess exactly the same depth of colour, the reading on the scale will record 100%. If the wedge be then moved upwards until the apex just appears above the lower border of the aperture, the reading on the scale will indicate 0%. It is very important to determine these two readings.

The solutions and chemicals required are as follows:

(i.) A solution of three cubic centimetres of glacial acetic acid in a litre of distilled water; (ii.) absolute alcohol; (iii.) potassium thiocyanide; (iv.) potassium carbonate and potassium bicarbonate; (v.) copper sulphate; (vi.) sodium chloride. These substances should be chemically pure. (vii.) Bang's solution which is prepared by placing 250 grammes of potassium carbonate, 200 grammes of potassium thiocyanide and 50 grammes of potassium bicarbonate, in a gauge glass and dissolving the salts in 600 cubic centimetres of distilled water heated to between 50° and 60° C.. Then 12.5 grammes of pure copper sulphate are dissolved in about 75 cubic centimetres of distilled water. The temperature of the copper sulphate solution must be 15° C.. This solution is immediately poured into the solution of the potassium salts, cooled to 30° C. and filled up to the litre mark. It is important to adjust the temperature as indicated, since too high a temperature especially of the copper sulphate solution will cause carbon dioxide to generate and would yield a solution which would reduce 10% more sugar than Bang's solution properly made. The solution is allowed to stand for twenty-four hours and is then filtered. The filtered solution is of a bright blue colour. (viii.) Potassium oxalate.

Method of Collection of the Blood Sample.

It is necessary to have two cubic centimetres at least of blood unless the sugar content is believed to be very high, when one cubic centimetre is sufficient. Oxalated blood is used. The blood is collected from a vein in a syringe and is then delivered into a test tube containing about ten or twenty milligrammes of potassium oxalate to prevent coagulation. It is well stirred with a glass rod. Not more than twenty milligrammes of potassium oxalate should be used for more than ten cubic centimetres of blood.

Two cubic centimetres of oxalated blood are delivered into twenty-five cubic centimetres of dilute acetic acid solution in a beaker containing about 0.75 gramme of sodium chloride; the pipette is washed out with acetic acid-sodium chloride solution. Any blood adhering to the pipette may be removed by alternately sucking in acetic acid-sodium chloride solution and blowing it out again. The blood solution is then brought to boiling point and filtered through filter paper which is washed twice with ten cubic centimetres of the acetic acid-sodium chloride solution. Ten cubic centimetres of this solution are used for each washing. The filtrates are collected in the evaporating dish. They should be clear and free from brown colour which indicates that the proteins have not been properly precipitated, probably because sufficient sodium chloride has not been added or too much oxalate has been added to the blood. The filtrate is then evaporated to dryness, first over a Bunsen burner and later over a water bath. This prevents caramelization of the sugar with a consequent brown colorization of the solution. It is essential to have clear solution for the colorimetric determination. To get rid of any slightly coloured elements, the residue may be washed a couple of times in hot alcohol and again evaporated to dryness. This is not always necessary. I have found that it does not alter the determination. The residue which is practically colourless, is dissolved in twenty cubic centimetres of distilled water to which have been added two grammes of potassium thiocyanide, 2.5 grammes of potassium carbonate and five cubic centimetres of Bang's solution. The mixture is boiled thoroughly for three minutes, timed by the watch, on a wire gauze, is cooled and is then brought up to twenty-five cubic centimetre mark with a 10% solution of potassium thiocyanide. After filtration this solution is ready to be placed in a cup or trough. In this solution some of the copper sulphate contained in the Bang's solution has been decolorized. Consequently the less deep the colour, the more sugar will the blood contain.

The standard solution with which this solution is compared, is prepared by placing five cubic centimetres of Bang's solution in the measure and diluting it to the twenty-five cubic centimetre mark with the 10% solution of potassium thiocyanide.

H. B. Selby and Company, Limited, of George Street, Sydney, supply with each instrument standard normal wedges calibrated to each particular colorimeter. With each set a graph is supplied, so that all that is necessary for the worker is to fill

up the cup with the blood prepared as described above, to adjust the rack and pinion until the depth of colour of the unknown solution corresponds exactly with the exposed portion of the solution in the wedge, to make four readings and to take their average and to refer to the graph from which the number of milligrammes per hundred cubic centimetres of blood is ascertained when 2.5 cubic centimetres of blood are used for the determination.

I prefer not to use the standard wedges, even though the makers state that the colours are permanent. I think it is better to calibrate the instrument yourself by using freshly prepared solution poured into an empty wedge. It is probable, however, that the standard wedges are quite reliable. For the calibration of standard sugar solutions the following procedure is followed: Five cubic centimetres of Bang's solution are delivered into a measure and diluted to the twenty-five cubic centimetre mark with 10% solution of potassium thiocyanide. This solution is poured into the empty wedge which is fitted into the colorimeter. The standard sugar solution is prepared by dissolving four grammes of chemically pure anhydrous glucose in one litre of distilled water. A few drops of xylol are added and the solution is placed in a stoppered bottle in which it will keep indefinitely One cubic centimetre of this solution contains four milligrammes of sugar.

In order to calibrate the standard copper solution one cubic centimetre of the glucose solution is mixed with the potassium salts and Bang's solution as described above and placed in the trough. Four readings are made and the average noted. The same process is repeated with two cubic centimetres of standard sugar solution. If the readings are 50 and 87 respectively, this will indicate that 50 would correspond to four milligrammes of glucose and 87 to eight milligrammes of glucose.

If two cubic centimetres of blood are used and a reading of 50 is obtained, this would indicate that two cubic centimetres of the sample of blood in question would contain four milligrammes of glucose or 0.2%. From the graph it will be seen that the amount of sugar contained in one, two or three cubic centimetres of any sample of blood may be worked out in a similar manner. The conversion of the intermediate reading is also easy. Let us suppose that the 0% mark for glucose which corresponds to the 100% mark for colour, be called y. The amount of glucose used up when the instrument is moved one point, say from 13 to 14, is called K. The reading for four milligrammes of glucose is indicated by x and that for eight milligrammes by x^1.

$K = \frac{4}{x-y} = 0.108$ milligrammes of glucose in 1 cubic centimetre of standard sugar solution or $K = \frac{8}{x^1-y}$ which is practically the same thing.

With an unknown solution in the cup when two cubic centimetres have been used, the reading may be indicated by R. Then $(R - y) \times K \times (\frac{100}{2})$ would equal the amount of glucose in each hundred cubic centimetres of blood. The division by two is carried out because two cubic centimetres of blood have been used in the estimation and the result has to be expressed in terms of one cubic centimetre. The multiplication by one hundred is used to give the result as a percentage. The following example may be given. Suppose that three cubic centimetres of blood have been used and the reading is 60. Then—

$(60—13) \times 0.108 \frac{100}{3}$ or $(60—13) \times \frac{10.8}{3}$ or $\frac{47 \times 10.8}{3} = 169.2$ milligrammes of glucose in 100 cubic centimetres of blood.

When two cubic centimetres of blood have been used and the final solution is colourless, it means that all the copper has been reduced by the sugar, so that two cubic centimetres of blood must contain more than eight milligrammes of glucose. In such a case the process should be repeated with one cubic centimetre of blood.

A fresh reading should be worked out for each lot of Bang's solution when the same colorimeter and wedge are used and the same sugar standards. The results in this case should always be the same.

Urinary Sugar.

Hellige's colorimeter may be used for the determination of the amount of glucose in urine and the results obtained are clinically accurate. The method is much simpler than the determination of sugar content in blood, there being no need for the precipitation of protein nor for the evaporation of the solutions. Larger amounts of diluted urine and of Bang's solution are employed. As a rule ten times the amount is used. The deeper colour produced in this way compensates for any pigment present in the urine which might alter the colour.

Fifty cubic centimetres of Bang's solution are placed in a 100 cubic centimetre beaker together with ten cubic centimetres of previously diluted urine (one part of urine to four or nine parts of water). The mixture is boiled vigorously for exactly three minutes and then allowed to cool to room temperature. The mixture is then returned to the 50 cubic centimetre graduated measure and filled up to the 50 cubic centimetre mark with 10% solution of potassium thiocyanide. About one gramme of animal charcoal is added; the mixture is well shaken, is allowed to stand for five minutes and is again shaken and is then filtered through a double filter paper. The filtrate should be of a clear, blue colour. It is poured into the trough of the colorimeter and compared with the standard wedge which is filled with pure Bang's solution. The concentration of sugar can be worked out easily and quickly in exactly the same way as that described for blood except that allowance must be made for the fact that ten times the quantity of fluid is used in the determination.

If a sample of urine containing sugar has a specific gravity of 1020 to 1030, it should be diluted ten times or more; if the urine contains very little sugar, a dilution of one in five should be used. It

is, of course, necessary to multiply the final reading by the dilution factor in order to ascertain the amount contained in one cubic centimetre of urine; from this the percentage is calculated.

Hæmoglobin Test.

In applying Hellige's colorimeter for the estimation of hæmoglobin it is advisable for the practitioner to have the normal hæmoglobin wedge which has been calibrated to the particular instrument and which is supplied with it. It is difficult to prepare an acid hæmatin standard from defibrinated blood. To do this it would be necessary to use a Van Slyke apparatus to determine its hæmoglobin content. I have found the Hellige's method superior to Tallqvist's scale.

Technique.

Blood is sucked up by a special pipette supplied with the instrument to the point marked 2 and the diluting fluid is sucked up to the point marked 202, in the same manner as when a hæmocytometer is used. The diluting fluid is dilute hydrochloric acid made up of six cubic centimetres of concentrated hydrochloric acid in five hundred cubic centimetres of distilled water. This is approximately a decinormal solution. The diluted blood is shaken thoroughly and is then placed in the colorimeter trough. After ten minutes the wedge is shifted until the colours match. The reading can be noted without loss of time and the percentage ascertained by reference to the scale supplied.

Other Blood Constituents.

There are many other determinations which can be carried out with the aid of Hellige's colorimeter. A simple one is the estimation of the creatinin content of blood. The uric acid content of blood takes slightly longer, but can be done with a little practice. Similarly the remnant nitrogen in blood can be estimated. These three determinations have attained a considerable degree of importance especially in connexion with the investigation of kidney function. Uric acid is the first product retained in the blood when a kidney is damaged; consequently an increase in the amount of uric acid in the blood in a patient with albuminuria and cylinduria would indicate the presence of an organic lesion. The values for remnant nitrogen are high in interstitial nephritis. The last product to be retained in the blood when a kidney is damaged, is creatinin. Values over five milligrammes per hundred cubic centimetres of blood usually indicate a fatal issue within six months.

The Phenol-sulphone-phthalein Test.

In order to estimate the renal function by the phenol-sulphone-phthalein test the patient is required to drink from two hundred to four hundred cubic centimetres of water and twenty minutes later to empty the bladder completely. One cubic centimetre of the sterile contents of an ampoule containing six milligrammes of phenol-sulphone-phthalein is injected into the muscles. The urine is collected one hour and ten minutes later and again two hours and ten minutes after the time of injection of the dye. The percentage of the dye may easily be determined by collecting each specimen separately in beakers, diluting each to a litre and comparing each with the standard. The standard is prepared by dissolving six milligrammes of the dye in one litre of water and adding enough urine containing no dye to the standard to impart the same colour to the standard that a sample of urine diluted to the same extent would possess. The sample to be tested is compared with the standard after the 100% and 0% marks on the instrument have been determined. It is necessary to add sufficient sodium hydroxide to the urine to render the sample alkaline. About ten cubic centimetres of a 10% sodium hydroxide solution are added to each litre of diluted urine.

Conclusion.

I think that any practitioner who is prepared to give up a small amount of spare time, would have no difficulty in carrying out the determinations described above. Many of these may appear rather long, but they are really quite simple and very little practice is required for their performance. The employment of the apparatus would also tend to increase clinical efficiency.

Reports of Cases.

A CASE OF DOUBTFUL DIAGNOSIS, PROBABLY STERNBERG'S DISEASE.[1]

BY EUSTACE RUSSELL, M.B., CH.B. (EDINBURGH),
Honorary Physician, General Hospital, Brisbane.

M.S., aged twenty-nine years, single, of no occupation, formerly a nurse. The patient was first seen by me in consultation in May last year.

Complaint.

The patient complained of cough, shortness of breath and general weakness. Latterly there has been some swelling of the face, some cough and at times night sweats.

Until a few months prior to my seeing her the patient had been a nurse in one of the large Sydney hospitals for two years, but she found herself unable to stand the strain of the duties of her profession. She returned to her home for a rest; her condition improved very much and she was able to take part in almost all the daily life of the house and at times was able to do hard domestic work. She found, however, that she was getting "nervy" and fanciful and she thought her condition was due to a general "run-down" state.

She then passed to the care of Dr. Mathewson, who diagnosed that the swelling of the face and by this time the neck, was due to obstruction to the *vena cava superior*. He had an X-ray examination carried out. This revealed a large tumour mass in the mediastinum. Dr. Mathewson then handed the patient over to me for investigation and treatment.

Examination.

The patient was a well-made, rather pale young woman, somewhat nervous and hesitant and obviously short of breath. The right side of the face was somewhat puffed and swollen and the right external jugular vein was large and tortuous. The mucous membranes of the lips were pale, the teeth were in good condition, with no obvious signs of pyorrhœa. Cyanosis was present when she sat up.

[1] Read at a meeting of the Queensland Branch of the British Medical Association on June 2, 1922.

The only definite sign within the chest was deficient air entry at the apex of the right lung and distinct dulness at the base of the right lung. The spleen was palpable, but the enlargement was not great.

Previous Illness.

The patient had been very healthy and had had no severe illness until two years previously, when she had an attack of appendicitis. The appendix was removed by operation. The menstrual function appears to have been normal. She was born in Mackay, Queensland.

Family History.

Her father and mother were both alive and healthy; she had three brothers and two sisters, all of whom were healthy. There was no history of cancer or tuberculosis in the family.

Course of the Disease.

The patient was removed to hospital and placed under observation. The right side of the chest became painful and a good deal of dyspnœa was at times present, even on lying, and the patient became very depressed. The dulness at the right base became more pronounced and the side was explored. Only pure blood was withdrawn.

The temperature at this time began to swing; it reached a sub-normal level in the morning and rose in the evening up to 37.6° to 37.8° C. (99.6° to 100° F.). The pyrexia was at no time high.

The blood examination recorded some leucocytosis, but no other abnormalities. The differential count was as follows:

Leucocytes	10,200 per cubic millimetre
Neutrophile cells	70%
Small lymphocytes	12%
Large lymphocytes	8%
Large mono-nuclear cells	6%
Basophile cells	4%

There was no response to the Wassermann test. The urine did not contain any abnormal constituents. The stools were natural.

An X-ray examination of the teeth and sinuses was carried out, but no abnormalities were detected.

The patient was then taken to her parents' temporary residence and the further progress watched.

Treatment.

The tentative diagnosis of a tuberculous mediastinitis or lymph-adenitis was made and it was decided to treat her on general anti-tubercular lines, as well as by the administration of increasing doses of arsenic. Iodides were also exhibited for a time, but the patient showed a very definite intolerance to the treatment and indeed medication on any lines proved difficult. Despite the ringing of the changes with various preparations, we were ultimately reduced to giving small doses of *ferri et ammonii citratis*. At the same time the patient spent the whole of her waking and sleeping hours out of doors and had gradually increasing exposures to direct sunlight.

The patient gradually improved in general condition, her well-being obviously ameliorated; the temperature became normal or nearly normal night and morning. The physical signs improved; the dulness at the right base was better and there was an improved air entry into the right apex.

I decided that the tumour must have decreased considerably in size and arranged for a further skiagram to be taken. This was done on July 26, 1921. The skiagram showed practically no change in the size or shape of the tumour; perhaps, indeed, it was a little larger; but the patient very soon after became ill and developed a series of symptoms and signs of grave illness that threatened to overwhelm her completely. The breathing became distressed, the face deeply cyanosed and the patient was in a state of orthopnœa and it seemed that she must soon die.

Nor was this all. A swelling appeared at the supraclavicular space, the face and neck became swollen and tumaceous, first the right and then the left; the right arm began to swell, then the left; the whole thorax became huge and tense; striæ appeared all over the swollen parts and the patient's condition assumed a dreadful and tragic aspect.

The swelling of the abdomen and of the lower extremities then followed and the œdema became so great that it looked as if the parts would burst.

The liver was enormously enlarged, but the spleen, previously palpable, was difficult to detect on account of the swelling. The superficial veins were prominent and there was a well marked *caput medusæ*.

Albumin appeared in the urine, which became scanty, and there was almost incessant and uncontrollable vomiting. The blood showed no change beyond a mild leucocytosis.

The swelling in the posterior triangle of the neck became larger and more fluctuating, so much so that I asked a surgeon to see the patient with a view to exploring the place for pus; wiser counsels prevailed, however, and we decided to leave the condition alone.

This state of affairs continued for some weeks. The condition appeared quite hopeless and from day to day and hour to hour we anticipated the dissolution of the patient.

I may remark *en passant* that the relatives were totally opposed to any surgical measures being taken; even permission to make the obvious skin puncture to relieve the tension was refused and the patient herself was no party to anything which was, in her opinion, going to aggravate the already almost intolerable pain and distress.

Morphine was the only medication used, with the exception of "Heroin" to relieve the cough and an alkaline mixture to palliate the flatulence.

This period was followed by a sudden and dramatic change in the patient's condition. The fingers on the right hand began to ooze, then those on the left and soon the arms and upper parts of the body began to improve, the swelling became less, the patient began to be comfortable and she slowly passed from a condition of size to an extreme thin and emaciated aspect.

The vomiting ceased, the patient took nourishment and by November she was in fair health again.

There was still some dulness at the base on the right side and the apex of the right lung was somewhat collapsed; but she was able to get about quite well, travel and enjoy life more or less as a normal individual.

The patient then passed out of my ken for a period more or less of six months. I heard from her from time to time and she was keeping moderately well, though she never became strong. I then saw her again at the beginning of this month and I found her condition much the same as I had left her in November last year.

Diagnosis.

This is the most difficult part of the case. The differential diagnosis would appear to rest between: (*i.*) Hodgkin's disease in some form, (*ii.*) some form of splenomegaly, (*iii.*) lympho-sarcoma, (*iv.*) leuchæmia, (*v.*) syphilis, (*vi.*) lymph-adenitis, (*vii.*) tuberculosis.

After a good deal of thought I came to the conclusion that the diagnosis rested between Hodgkin's disease and tuberculous lymph-adenitis. My impression is still that the case is one of primary mesenteric gland infection with a secondary mediastinal involvement, that is to say, tuberculous in origin. I think, although there is no evidence to prove it, that the trauma consequent upon the appendicectomy was the *fons et origo* of the gland trouble.

If there had been a gland section available we might have been able to clinch the diagnosis, but the characteristic feature of the case has been the limitation of the disease to the mediastinal region and there has been at no time a general glandular enlargement.

The blood examination threw very little, if any, light on the subject, except in a negative sense, and the Wassermann test excluded syphilis.

There has been from time to time a good deal of discussion as to whether or not Hodgkin's disease is tuberculous in origin; cases have been described where the tubercle bacillus has been found in the lesions of Hodgkin's disease.

It is certain, however, that a great number of patients with Hodgkin's disease die from generalized tuberculosis, but in these cases the invasion by the tubercle bacillus is looked upon as a secondary process and entirely apart from the essential disease. The ætiology of Hodgkin's

disease is not known, so that it is possible that the tubercle bacillus may be an unknown or not yet understood factor in its causation.

In a case described by Fox in *The Lancet* last year, there were tubercle bacilli in the lymph-adenomatous lesions; the condition clinically was that of Hodgkin's disease and there was present a focus of tuberculous type, not characteristic, Fox says, which resembled lymph-adenoma.

In this case, too, the tubercle bacillus had actually invaded the tissues which were the chief site of the primary disease, a most unusual proceeding on the part of the tubercle bacillus in its rôle as end-disease of a cachectic state. A similar case is described by Fox and Farley in the *Medical Clinics of North America*; in these two instances the abdominal glands were affected.

Sternberg also described a condition which he called tuberculous pseudo-leuchæmia, but I have no literature on the subject to guide me. My case seems to resemble the two cases quoted above and Fox and Farley claim theirs to be instances of Sternberg's disease.

Curiously enough, there are quoted elsewhere two cases of true Hodgkin's disease in which the acute abdominal pain was thought to be appendical and the patients were actually prepared for operation.

It is a very difficult matter to give a definite diagnosis in this case and I very much doubt if a definite diagnosis will be made *ante mortem*.

Subsequent History.

The patient remained very much the same for some months, with the exception that from time to time on examination of the chest there could be detected a definite diminution in the air entry into the right lung, with an increasing area of dulness extending from the middle line outwards posteriorly, until there was a large area corresponding to that of the middle and lower lobes of the lung which appeared to be occupied by tumour.

The upper lobe of the lung did not appear to be impaired to any appreciable extent; the air entry remained good and there were no signs of consolidation.

From time to time there were attacks of vomiting and the liver became much enlarged.

There was no return of the grave symptoms which characterized the earlier period of the illness, but the patient was obviously losing ground and would die before long. She actually lived for a further nine months, almost exactly two years after she was first seen by me.

There developed a curious train of mental symptoms, ranging from facile vapourings to maniacal ravings and these culminated in a coma which termined the illness.

Dr. Espie Dods very kindly conducted the *post mortem* examination; there was found a large tumour mass filling the mediastinum and extending to the right, practically the whole of the lower lobes being invaded and destroyed by the toumour.

There is an illustration in Bland-Sutton's "Tumours Innocent and Malignant" (page 43, Figure XVIII.) which gives a very good idea of the *post mortem* state.

The tumour was examined by Dr. J. V. Duhig who reported that the condition was one of lympho-sarcoma.

Reviews.

NEUROLOGICAL DIAGNOSIS.

We have before us the sixth edition of Sir James Purves-Stewart's work on the diagnosis of nervous diseases.[1] Those who remember the modest proportions of the first edition, will be surprised at the growth in size of the volume. But although some may complain of this enlargement, a careful perusal of its chapters does not show in what way the book could be reduced. Of course, the matter might have been served up in catalogue form, but to have done so would have spoiled a book whose main charm lies in the fact that the writer by interposing pen touches drawn from a ripe clinical experience creates interesting chapters out of bare and unattractive material. In so doing he lengthens his pages, but he makes them readable. Another thing to be remembered is that during and since the great war neurology has made remarkable advances. Many new and important facts arising from war injuries and neuroses have been extensively studied and to narrate these observations, even briefly, demands much space. And here we may mention that although Sir James Purves-Stewart has cut out the special chapters on war neuroses and war injuries which appeared in the fifth edition, in the new edition we repeatedly come upon facts bearing upon diagnosis gleaned from the study of war casualties. We do not object to their inclusion; on the contrary we think their telling is necessary because they apply equally well to the diagnosis of cases arising in civil life.

Neurology even in its clinical aspects alone has grown into such a large subject that it is difficult for a single-handed writer both to mention everything and avoid error. Accordingly we must excuse statements such as this: "The cerebral membranes are innervated by the trigeminal nerve," when we know that it is the *dura mater* alone, and it only in part, which is so supplied. Again the statement: "A normal individual can locate touch accurately to within a fraction of an inch" only applies to certain parts such as the palm of the hand and the face, and we close our eyes to omission altogether of the pilomotor reflex.

In conclusion the edition contains a new short chapter on delirium, while the chapter on psycho-neuroses has been completely re-written and the whole work brought up to date. We again congratulate the writer and earnestly recommend his work to all our readers.

[1] "The Diagnosis of Nervous Diseases," by Sir James Purves-Stewart, K.C.M.G., C.B., M.D. (Edin.), F.R.C.P.; Sixth Edition, Revised; 1924. London: Edward Arnold and Company; Demy 8vo., pp. 648, with 285 illustrations. Price: 30s. net.

THE HISTORY OF "INSULIN."

In a little monograph of some seventy pages, Professors Macleod and Banting, of Toronto, have summarized the steps in the research which led to the discovery and successful use of "Insulin" as the therapeutic agent in the treatment of *diabetes mellitus*.[1]

It is a fascinating story and is told in three lectures, given for the Beaumont Foundation under the auspices of the Mayne County Medical Society, Detroit, Michigan, United States of America.

Much has been published on this subject in many journals, but this summary of the work, given by the two leaders in the research, should be read by all who are interested in the treatment of diabetes.

In the first lecture Professor Macleod deals fully with the pancreas in its relation to digestion and metabolism of carbo-hydrates and gives a full historical *résumé* of the subject. In Lecture No. II. Professor Macleod also deals with the experimental results from the use of "Insulin." In Lecture No. III. Professor Banting treats also of experimental work upon "Insulin" and details the steps which led up to the successful use of that substance in human diabetics. He tells how he got the idea which led up to this work from an article written by Moses Barron in *Surgery, Gynecology and Obstetrics* in the issue of November, 1920, and gives full credit to the assistance he received from his co-workers Macleod, Best, Graham and Collip.

In an interesting introduction Dr. Davis announces that this work was awarded the Alfred Nobel Prize as being the most noteworthy for the year in the domain of medical science and that with the finest spirit of fairness and professional generosity, Professors Macleod and Banting divided the prize money (forty thousand dollars) with their co-workers, Messrs. Best and Collip.

[1] "The Antidiabetic Functions of the Pancreas and the Successful Isolation of the Antidiabetic Hormone—Insulin," by J. J. R. Macleod and F. G. Banting, being Series Number Two of the Beaumont Foundation Lectures at Detroit, Michigan, U.S.A.; 1923. St. Louis, U.S.A.: The C. V. Mosby Company; Post 8vo., pp. 69, ith four figures. Price: $1.50.

The Medical Journal of Australia

SATURDAY, OCTOBER 18, 1924.

The Infant Food Standards.

Several years ago it was pointed out in this journal that the Commonwealth and State authorities were adopting a policy in regard to the importation and sale of infants' foods which was both opposed to reason and detrimental to the interests of the community. At that time an arbitrary formula was serving as a standard on which all foods sold as suitable for infants should be based. This formula was said to represent the average composition of human milk. It is unnecessary to discuss this formula at the present time or to point out that the vast majority of Australian mothers during the first three months after the birth of their babies secrete milk having a composition that differs materially from the alleged average. In September, 1922, a conference of the medical officers of the Commonwealth and State health services considered this question and sought to modify the existing standards in order to attain uniformity. In view of the claim put forward in this journal on various occasions that the regulations should be amended so that the time-tried infants' foods should not be required to be labelled "not to be given to infants under six months of age except on medical advice," it was determined that a variation of 35% below or above the so-called human milk standard should be allowed. The medical officers of the health departments apparently realized that they had been advocating an illogical and untenable policy and that it would be advisable to remove the restrictions which were obtaining to the sale of many well-known infants' foods. Later it was agreed that the Commonwealth and the States should amend their respective regulations in accordance with a common policy. In effect the manufacturers of infants' foods should be allowed to offer their products for sale provided that the formulæ were printed on the label and the ingredients were clean and pure. This result was eminently satisfactory in view of the fact that it is at times desirable for mothers to find some substitute for the natural food of infants. Artificial feeding of infants is admittedly a difficult matter and success can only be attained if care be expended and a suitable diet for each baby be selected from the available preparations. There are eight or ten excellent foods on the market in England. These foods have been in use for a long series of years and their value under certain circumstances is unchallenged by competent authorities. There is no doubt that many infants have been helped through critical epochs by their means. To require the manufacturers to place on the labels of these infants' food that they must not be given to infants under six months of age, when their chief if not sole purpose is for emergency feeding of young infants, is obviously absurd. No honest manufacturer would be prepared to comply with such an order. In consequence these foods were to a large extent excluded from the Australian market for several years. The prospect of the introduction of uniformity of policy and of the general adoption of rational regulations was heartening to manufacturers and satisfactory to the medical profession. It was an objective at which this journal has aimed. The Commonwealth Department of Health and the Departments of Public Health of five States loyally carried out the undertakings adopted by the conference. Early in this year new regulations were promulgated under the Foods and Drug Standards Regulations in Victoria. Among these new regulations Number 25 reads as follows:

Infants' Foods.

(1) No person shall advertise, describe or sell any foods as suitable for infants unless (*a*) its constituents are of the same chemical character as those of human milk and (*b*) it is free from woody fibre, preservative mineral substances insoluble in deci-normal hydrochloric acid and any other harmful matter.

(2) Every package of infants' food shall bear a label in which shall be written legibly and prominently (i.) the date when the food was packed: provided that in the case of a metal receptacle such date may be impressed thereon; (ii.) a statement showing (*a*) the source of the proteins and fats, (*b*) the percentage composition of the food when prepared in accordance with the directions and (*c*) the average percentage composition of human milk which for the purpose of this Regulation shall be prescribed as hereunder:

Proteins	1.5%
Fat	3.5%
Lactose	6.5%
Ash	0.2%

(3) Food advertised, described or sold as suitable for infants under the age of six months shall not contain

any carbo-hydrate other than lactose: provided that the presence of not more than 1% of starch in such food when prepared for use shall not be deemed to be a contravention of this provision.

(4) The provisions of sub-clause (2) *supra* shall not apply to milk as defined in these Regulations.

(5) The provisions of sub-clause (2) (ii.) *supra* shall not apply to any food where the label contains the statement: "This food shall not be given to infants under the age of six months except under medical direction" in letters of not less than six points.

Apart from the deplorable failure of the authorities in Victoria to follow the agreements made at the conference, this action is opposed to the public interests. In the first place the first clause means that no food other than human milk may be advertised, described or sold as infants' food, for the chemical composition of cows', goats' or other milk and of the various foods on the market differs from that of human milk. This clause necessarily excludes the sale of foods like "Benger's Food," "Mellin's Food," "Allenbury's Food," "Horlick's Malted Milk," "Neave's Food" and several other infants' food. It probably also excludes the dried milks. The third clause excludes many of the best foods, since dextrinized starch is prohibited, except in the ridiculously minute quantity of 1%. Moreover, the action of one State in Australia will have the effect of preventing the manufacturers of these foods from trading in other States or from setting up factories in the Commonwealth, since the market is not large enough to warrant the expenditure of a considerable sum of money unless the products can be sold in all parts of the Commonwealth. The rights of Victorian mothers and babies must be recognized and we claim that the authorities must not be allowed to inflict so heavy a penalty on the community without justification or adequate reason. That infants should be fed at the breast whenever this is possible is axiomatic. But there are times when this ideal is impossible and then each mother should be at liberty to select any good food that may suit her baby. The health authorities have intervened too long in this matter and must now realize that the public must be free to purchase foods of proven value without restrictions that are unsound and unnecessary. The practising portion of the medical profession is more competent to judge whether or not a food is suitable for infants than any departmental medical officers and the opinion of the former is strongly in favour of the occasional employment of the excellent food preparations mentioned above. These regulations in Victoria must be withdrawn without loss of time.

Current Comment.

CHANGES IN THE POLARITY OF THE FŒTUS.

Dr. Ridler's article published in this issue is a useful account of the work which may be done at an ante-natal clinic. It is calculated to arouse the interest of medical practitioners who may not perhaps appreciate either the nature of the work associated with ante-natal supervision or what may be accomplished by its adoption. It is obvious that the methods in vogue at an ante-natal clinic will in time be adopted in practically all obstetric work. This will occur, if for no other reason, because the patients themselves will recognize its value. Obstetricians associated with ante-natal clinics report that many patients are coming to them voluntarily and are asking that care be taken of them at any rate in the latter days of their pregnancy.

In the last part of his paper Dr. Ridler raises the question of altering the polarity of the fœtus. It is universally admitted that breech delivery is much more dangerous to the fœtus than that by the vertex; particularly is this so in the case of *primiparæ*. The position of the fœtus is constantly changing throughout the whole of its intra-uterine life. It is, moreover, a comparatively simple matter for the medical practitioner to accustom himself to determine accurately the position of the fœtus by abdominal palpation. It is thus a common practice when breech presentation is recognized in the last days of pregnancy, to alter the position by abdominal manipulation. Good results have been obtained by many practitioners in this way. Prolapse of the cord as mentioned by Dr. Ridler must be regarded as an accident and cannot be held to be a definite indication.

The changes in the polarity of the fœtus in the later months of pregnancy were discussed recently before the Royal Society of Medicine by Professor A. Louise McIlroy and Dr. Dorothy Leverkus.[1] In the first place they discussed the causes of the much more frequent occurrence of head presentation. Several views have been adopted to explain this fact. In the first place the relationship of the shape of the uterus to the fœtus in its position of flexion has an influence in determining the position. The normal pregnant uterus is broader at the fundus than in the region of the lower segment. The fœtus when nearly at full time is broader at its pelvic than at its cephalic pole. It is therefore most usual for the pelvic pole to occupy the fundus. The uterine walls by their uniform pressure tend to maintain this position. Gravity has been held by Matthews Duncan to be a factor in maintaining the

[1] *Proceedings of the Royal Society of Medicine*, August, 1924.

head presentation. The activity of the fœtus has also been held to enable it to kick itself out of the region of the maternal pelvis and it has been pointed out that when the pelvic pole of the fœtus is in the fundus, there is no bony resistance against which it can kick. Several other reasons have been given for the persistence of pelvic presentations. Prematurity is given as a cause of pelvic presentation. Professor McIlroy and Dr. Leverkus point out that in the later stages of pregnancy the presentation in the majority of cases becomes altered to the vertex type. Multiparity has been held to influence persistence of pelvic presentations and the obstruction of the pelvic outlet by tumours and *placenta prævia* has been looked on as a cause. This obstruction may influence pelvic deliveries, but cannot be said to influence spontaneous version of the fœtus during pregnancy. Deformities of the fœtus, such as hydrocephalus and anencephaly, will obviously tend to cause variation from the normal position.

Professor McIlroy and Dr. Leverkus have investigated the findings in nineteen hundred patients who were treated in the ante-natal clinic and afterwards completed delivery in the wards of the Royal Free Hospital of the London School of Medicine for Women. Pelvic presentations were found at one time or other in six hundred patients. Pelvic presentation was present at delivery in thirty-three of these. In eighteen of the series of thirty-three the fœtus was premature. It is pointed out that it is necessary to remember that pregnancy was interrupted or that premature labour occurred in a number of instances owing to pathological conditions in the mother. Vertex delivery took place prematurely in twenty-five of the six hundred in whom pelvic presentation was found at one time or another during pregnancy. Sixteen of the patients were *primiparæ* and nine were *multiparæ*. Version was either performed or occurred spontaneously. Of the six hundred patients already referred to three hundred and forty were *primiparæ* and one hundred and forty-seven were in their second pregnancy. These figures are not particularly valuable as the majority of patients attending the clinic were *primigravidæ*. Spontaneous version from the pelvic to the cephalic pole occurred in four hundred and fifty-one patients. This spontaneous version occurred most frequently between the thirtieth and thirty-sixth weeks and as late as the fortieth week. Version was successfully performed in sixty-nine patients and in the greatest number of these between the thirty-second and thirty-fourth weeks. Anæsthesia was employed in four instances. The infants were all born alive. Spontaneous rotation occurred again and pelvic presentation was resumed in five instances, but in every one of these the fœtus righted itself before the onset of labour. Attempts at version failed in twenty-seven patients. Seventeen of these were *primigravidæ* and ten were *multiparæ*. Spontaneous version occurred subsequently in thirteen. Version was again attempted and successfully performed in eight cases. Failure was found to be due to extension of the fœtal legs in six instances. Professor McIlroy and Dr. Leverkus lay stress on the fact that extension of the legs is the chief factor which influences the persistence of pelvic presentations. They point out that extended legs act as a brace and prevent the natural curve of the spine taking place. Extension of the legs is the common cause of failure to perform version. Anæsthesia was employed in eleven patients in whom the fœtal legs were extended and version was successful in only five of them. They add that although attempts at version in such instances may prove futile, spontaneous version may occur later on. They also found that radiography was of material assistance in the diagnosis of extension of the legs. When the legs are extended, diagnosis by palpation alone is very difficult for the pelvic pole of the fœtus is then hard and compact and may be mistaken for the cephalic pole. Reference has repeatedly been made in the pages of this journal to the use of radiography in obstetrics and to the part which it is destined to play as a routine in its practice. It would have been interesting if Professor McIlroy and Dr. Leverkus had stated to what extent radiography had actually been used in their complete series of nineteen hundred patients.

It was found that the length of the umbilical cord had no influence upon the rotation of the fœtus or on the failure to perform version. As in cephalic presentations long cords were found to have a greater tendency to loop round the neck or body. Spontaneous version occurred in the case of a fœtus whose umbilical cord was as short as twenty-five centimetres. Version was performed with a cord of similar length. Among the pelvic polar presentations at delivery of *primigravidæ* at term one instance of fœtal death from prolapse of the cord occurred. The cord measured forty-five centimetres (eighteen inches) in length. Version was performed at the thirty-fourth week, but the pelvic pole was found to be presenting at the fortieth week. Version under anæsthesia failed. No cause could be found for the recurrence of pelvic presentation. In the whole series there were only two instances in which death of the fœtus could be associated with pelvic presentation.

In summing up their results Professor McIlroy and Dr. Leverkus state that no reason can be assigned in the majority of instances for abnormal presentation. They are at a loss to state why a breech presentation is spontaneously transformed inte a vertex or a vertex into a breech. They point to the four hundred and fifty-one instances in which spontaneous version from breech to vertex occurred and add that Nature can in the majority of cases can be trusted to do what is needful. If by the thirty-sixth week spontaneous version has not taken place, it is wise to resort to version. They regard this communication as a preliminary report and suggest that the position of the uterus, the condition of the maternal spine and pelvic curves may be of value for investigation. The fœtal movements may perhaps be explained by the complicated theory of relativity. In any case Professor McIlroy and Dr. Leverkus are to be congratulated on the observations they have made. Their work indicates the importance of the compilation of accurate hospital records.

Abstracts from Current Medical Literature.

THERAPEUTICS.

Caffeine as an Antidote for Morphine.

C. C. Haskell, J. E. Rucker and W. S. Snyder (*Archives of Internal Medicine*, March 15, 1924) insist that the universal approbation of caffeine as a satisfactory physiological antidote in cases of morphine poisoning is frequently misapplied. Caffeine, either in large doses or in doses comparable to those sometimes employed clinically, instead of proving an effective antidote to morphine in animals, actually exerts an unfavourable action. The two drugs exert an undesired synergism in their action on the heart, both producing depression. In man, as distinct from laboratory animals, the respiratory centre is peculiarly sensitive to the action of morphine and death in human beings may result from doses of morphine which affect the circulation little or not at all. On the contrary, in the lower animals the larger doses necessary to cause death involve the musculature of the heart as well. It is conceivable therefore that caffeine, by combating the respiratory depression which is the sole or chief factor in clinical morphine poisoning, may be of value as a physiological antidote.

Lugol's Solution.

E. H. Mason (*Canadian Medical Association Journal*, March, 1924) reports that a number of patients suffering with exophthalmic goitre were treated with Lugol's solution (iodine 5%, potassium iodide 10%) and discusses recent work done in this connexion. Patients suffering from typical exophthalmic goitre were selected. They manifested thyreoid enlargement, tremor, tachycardia, exophthalmus and increased basal metabolism. In each instance reported the tremor, tachycardia and increased metabolic rate were diminished or disappeared after four to six weeks in bed and after the administration of 0.3 cubic centimetres to one cubic centimetre (five to ten minims) of Lugol's solution per day, the exophthalmos and thyreoid enlargement were not definitely affected. Intermission of the treatment with Lugol's solution was followed by a return of symptoms in some instances, so that a continuation of administrations of Lugol's solution after discharge from hospital was advised.

Scarlet Fever Antitoxin.

G. F. Dick and Gladys H. Dick (*The Journal of the Americal Medical Association*, April 19, 1924) have obtained a scarlet fever antitoxin by immunizing a horse with scarlet fever toxin. They assume that the causal organism of scarlet fever is a streptococcus, that it produces a toxin and that this toxin, when injected into susceptible human beings, produces nausea, vomiting, malaise, fever and a scarlatinal rash. Used in high dilutions, the toxin yields a skin test for susceptibility to scarlet fever. In more concentrated solutions it can be used in preventive immunization. The blood serum of persons immunized with the toxin and of patients convalescent from scarlet fever contains an antitoxin which neutralizes the toxin. With the aim of producing a scarlet fever antitoxin a horse was immunized with subcutaneous injections of sterile filtrate from broth cultures of streptococci which had produced experimental scarlet fever. The horse's serum was then found to neutralize effectively dilutions of the toxin. When concentrated the antitoxin loses none of its efficacy. The therapeutic value of the antitoxin has yet to be demonstrated.

Rectal Administration of Digitalis.

Robert L. Levy (*Archives of Internal Medicine*, June 15, 1924) administered digitalis *per rectum* twenty-six times to nineteen patients suffering from auricular fibrillation. The preparation employed was an aqueous solution of a purified extract of digitalis leaves. One cubic centimetre of the solution contained the equivalent of 0.1 gramme of powdered leaf. The amounts injected varied from eight to twenty cubic centimetres. The total dose was administered at one time. The average time which elapsed before a maximal effect on cardiac rate was apparent, was nine hours thirty minutes. In every instance a desirable therapeutic effect was apparent. In many cases the results were dramatically rapid and beneficial. The greater portion of the drug given by the rectum reaches the heart *viâ* the mesenteric and portal veins and not by way of the inferior *vena cava*. The method is intended to supplement, not supplant, the oral method of administration. It is useful in the presence of nausea and vomiting or after surgical operation, when oral medication is not feasible. The dose is comparable to that employed when a large single dose is given by mouth.

Active Principles of Peptone.

A. J. Clark (*The Journal of Pharmacology and Experimental Therapeutics*, February, 1924) examined several specimens of peptone and found that all contained a substance which is a general stimulant of plain muscle. The action of this substance resembled that of extracts of the posterior lobe of the pituitary gland. Certain varieties of peptone (for example, Armour's peptone) contain a substance which, like adrenalin, has a very powerful sympathetico-mimetic action. These two substances are soluble in absolute alcohol, insoluble in ether and dialyse freely. No definite evidence of the presence of histamine was discovered in any of the specimens examined. A highly toxic alcohol-soluble substance can be produced from peptone by boiling it with alcohol containing either alkali or acid. This substance is apparently identical with Vaughan and Wheeler's alcohol-soluble protein poison. It is probably present in untreated peptones in small quantities. Its actions are quite distinct from those of histamine.

Camphor.

H. M. Marion and J. D. Soifer discuss the literature on, and report their own investigations into the value of camphor-in-oil as a cardiac stimulant (*The Journal of the American Medical Association*, July 12, 1924). They state that both clinical and pharmacological evidence on the subject is conflicting. Many clinicians and pharmacologists consider that camphor has no stimulating effect on the heart or circulation. Fourteen patients with heart failure and two normal persons were given intra-muscular injections of camphor 0.2 gramme (three grains) to three grammes (forty grains. The small dose of 0.2 gramme was repeated at two-hourly intervals till five injections had been given. Immediately before and at intervals of five, fifteen and thirty minutes after each injection, observations were made on the rate and character of the heart beat, blood pressure, vital capacity, rate and character of respirations, clinical condition of the patient and an electro-cardiogram was taken. Various cardiac abnormalities existed in the patients tested, auricular fibrillation, mitral stenosis and insufficiency, aortic disease and heart failure with arterio-sclerosis. In none of the sixteen persons tested did camphor exert any demonstrable influence on the circulation. Slight changes in heart rate, respiratory rate and so forth did occur, but these were quite inconstant and were such as occur normally in such subjects. The symptoms of the patients were not in any way changed. Twelve of the fourteen patients received digitalis after the camphor had failed at intervals of a few hours to twelve days later. Ten manifested prompt improvement, in six this improvement was definite and lasting. The conclusion arrived at was that camphor had no demonstrable action on the circulation in congestive heart failure and therefore had no rational place in the treatment of that condition.

"Allonal."

M. A. Burns (*Medical Journal and Record*, January 16, 1924) reports his experiences of a comparatively new compound in relieving pain and in the treatment of insomnia. The drug is a combination of allyl-isopropyl-barbituric acid (hypnotic) and phenyl-dimethyl-dimethylamino-pyrazolon (analgesic). The author quotes Ungerleider who used "Allonal" in the treatment of drug addicts, substituting "Allonal" for morphine, cocaine and heroin. Seventy-two drug addicts were treated in this way, "Allonal" being used to allay insomnia and hyperexcitability. Strychnine and plenty of nourishing food, especially carbo-hydrates, were the only adjuncts. All were said to have recovered and have been

without drugs of any kind since May, 1923. "Allonal" has been used by the author with success for tabetic pains and by others for neuralgia and dysmenorrhœa. It has also been widely used to allay excitability and insomnia in patients suffering with *dementia præcox* and various forms of dementia. The usual dose is 9.12 to 0.6 gramme (two to ten grains).

UROLOGY.

Excision of Urethral Stricture.

G. MacGowan (*Journal of Urology*, December, 1923) describes a modification of the Hamilton Russell operation for the cure of strictures which are not amenable to less radical operations than excision. To expose the urethra thoroughly an inverted "Y" incision is made in the perineum with the patient in the exaggerated lithotomy position. The *raphé* of the bulbo-cavernous muscle is divided completely and the sheath of the bulb and the *corpus cavernosum urethræ* are divided longitudinallly. The incision extends from the urogenital diaphragm forward to any desired point on the under surface of the urethra. This exposure allows access for under-cutting and mobilizing the *corpus cavernosum urethræ* after the stricture has been excised, so that the cut end of the urethra can be united with as little tension as possible. Instead of allowing the urethra to lie open as a riband when united dorsally, as in the Russell method, the author makes three slits at equidistant points around the circumference of both cut ends and when the corresponding short flaps so produced are sutured, a tubular finish is secured. The sutures are of fine chromacized catgut. Traction sutures of silk are placed at some distance from the chromacized catgut line and they help to relieve tension. The *corpus cavernosum* is anchored in its new position by lateral sutures at various points. The wound is left partly open and the urine is deviated by a previously placed suprapubic drain.

Calculous Anuria.

D. R. Melen (*Journal of the American Medical Association*, February 16, 1924) discusses the acute or sudden form of calculous anuria. As a result of obstruction by a calculus there are increased renal pressure, congestion and œdema of the kidney and rapid diminution of secretion. Owing to the latter result, hydronephrosis seldom occurs with complete obstruction; the enlargement is wholly due to the congestion and œdema. Finally, after forty-eight hours of obstruction, destructive changes begin in the tubules and glomeruli. To account for the cessation of secretion in the opposite kidney when the latter is healthy, the circulatory-congestive theory of Frank seems the most logical of the various views on the subject. Frank's view is that compensatory vascular activity fills up the healthy kidney so much with arterial blood that the extra volume cannot be got rid of efficiently by the veins. Urinary secretion is thus as effectively interfered with as if the renal vein were ligated. The patient may sometimes be anuric for as long as two weeks without developing signs of uræmia. The mortality in patients treated by surgical operation is about one-half of that in patients treated medically. The surgeon should not persist in attempts to relieve the obstruction by means of the ureteric catheter. Pyelostomy is the most suitable operation. Nephrostomy is too dangerous from the standpoint of hæmorrhage.

Non-Surgical Treatment of Ureteric Calculi.

R. L. Dourmashkin (*Urological and Cutaneous Review*, June, 1924) reviews his treatment of sixty patients with ureteric calculi. In 70% of the patients stones were passed after intra-ureteral manipulations, 15% refused further treatment, 8% were operated upon and 7% were still under treatment. The most difficult problem is to induce the patient to undergo repeated cystoscopy, if necessary, and to make him realize that evacuation of the stone by dilatation of the ureter is better surgery and will more surely prevent recurrence than operative removal. Calculi up to nine millimetres in width have been removed by dilatation. Calculi with an irregular surface are apt to resist dilatation treatment. Operation is more urgently demanded when the stone is in a diverticulum or is tightly impacted and when sepsis is far developed. With non-impacted stones, very often the best method is to use a large catheter (7 to 11 F.) and attempt to push the stone up into the dilated ureter above it. The strictured area below the calculus is gradually dilated. With impaction of the stone in a fibrosed area filiform bougies should first be used to try and get past the stone. Ureteral meatotomy is important.

Tumours of Kidney Pelvis and Ureter.

G. J. Thomas and E. A. Regnier (*Journal of Urology*, March, 1924) believe that tumours of the renal pelvis and the ureter are not so rare as is generally thought. They have collected from the literature two hundred and fifty-three reports, five of the patients were under their personal care. The diagnosis is naturally difficult and often missed. The youngest patient was three and a half and the oldest eighty years old. Two-thirds of the patients were males. The ætiology is unknown. In only 5% were the tumours associated with stones and 67% of the tumours were definitely malignant. All tumours should be considered potentially malignant and therefore the treatment should always consist in complete nephrectomy. The great majority are papillary in character and closely resemble similar tumours found in the bladder. The path of metastasis is not yet determined, but metastases occur very late. As a rule tumours of the ureter arise from cells carried in the urine from a primary papilloma of the renal pelvis. Such a ureteral tumour but rarely represents a metastasis from a bladder tumour. Sarcomata of the renal pelvis and ureter are comparatively rare. Hæmaturia is the most important symptom. Lumbar pain and a palpable tumour are the other cardinal symptoms, but occur less commonly. Pyelography and ureterography are valuable diagnostic aids, but when actual obstruction of a conducting tract or filling of a cavity by the tumour is absent, the shadow will remain normal in shape.

Congenital Abnormalities of the Kidney and Ureter.

O. S. Lowsley, L. B. Kingery and H. C. Clarke (*Journal of Urology*, March, 1924) state that the various forms of fused kidney, misplaced kidney and duplicated ureter are often associated with some actual pathological condition necessitating treatment. Among four thousand two hundred and fifteen autopsies made by Clarke, sixty-two instances of congenital abnormalities of the kidney or ureter were discovered. In their daily work the authors discovered ten instances by pyelograms and ureterograms during the course of eight hundred cystoscopic examinations.

Concentration of the Prostatic Fluid.

H. W. E. Walther (*Journal of Urology*, November, 1923) considers that the results of microscopical study of the prostatic expression are often unsatisfactory. If one to two cubic centimetres of the fluid are allowed to drop directly into a centrifuge tube and then centrifuged, more pus cells (if present) will appear in each field than if the ordinary methods are used. Moreover, there is much greater certainty that the observer will avoid missing scarce bacteria.

The Semen in Seminal Vesiculitis.

E. C. Ballinger and O. F. Elder (*Journal of Urology*, November, 1923) advocate the microscopical examination of a condom specimen of semen in chronic vesicultis. The patient should urinate before coitus. The smear should be compared with a stained smear of the prostatic expression made about the same time.

Ureteral Stricture.

G. L. Homer (*Journal of the American Medical Association*, February 16, 1924) disagrees with the common view that the dense scar tissue often found around a ureteric calculus is due to irritation by the stone. He thinks that the stricture is usually primary. Small stones are often impacted whereas with a normal ureter they would have passed on. Ureteric stones are generally found in one of two areas, three to five centimetres below the pelvic brim and two to five centimetres above the bladder. These are the areas in which nearly all structures occur. Ureteric strictures are almost always bilateral. They are diagnosed both by the sensation of a "hang" on withdrawing a wax bulb through the stricture and by a study of ureterograms.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Women's Hospital, Crown Street, Sydney, on August 14, 1924. The proceedings were more or less of an informal nature and the greater part of the time was spent in clinical demonstrations by various members of the Honorary Staff.

Thrombosis and Embolism.

DR. JOHN MORTON read a paper entitled: "Thrombosis and Embolism" (see page 390).

Posterior Colpotomy.

DR. H. C. E. DONOVAN read a paper entitled: "Notes on Posterior Colpotomy" (see page 389).

Uterine Fibroids.

DR. A. J. GIBSON read a paper entitled: "Notes on Three Cases of Fibroid of the Uterus." This paper was published in our issue of October 4, 1924, page 350.

Contracted Pelvis Caused by Infantile Paralysis.

Dr. Gibson showed a female patient, aged forty-one years, a *multipara*, who had been admitted to hospital for the purpose of demonstration at the meeting. Her past history revealed the fact that she had been operated on fourteen years previously by Cæsarean section. Infantile paralysis at the age of four years had involved the left lower limb. The patient's appendix had been removed sixteen years previously and the date of a tendon transplantation was unknown. Dr. Gibson pointed out that the patient manifested a residual paralysis of the left leg. Considerable wasting of the limb was present. There was an apparent shortening of 3.75 centimetres (one and a half inches) and an actual shortening of 9.4 centimetres (three and three-quarter inches). Lordosis and a compensatory scoliosis with convexity to the left were present. The inter-spinous measurement was twenty-two centimetres (eight and four-fifths inches), the inter-cristal measurement was twenty-six centimetres (ten and two-fifth inches) and the external conjugate was sixteen and a half centimetres (six and three-fifth inches).

Nephritis.

Dr. Gibson also showed a woman, aged twenty-nine, a *primipara*, who had been admitted to hospital on August 1, 1924. Her last menstrual period had occurred on January 17, 1924. She had previously suffered from scarlet fever and nephritis. The patient had felt quite well until two days before admission to hospital. She had then suffered from headache, dimness of vision and swelling of the hands. On admission it had been noted that the patient was pale and that her eyelids were puffy. Examination of the heart had revealed the presence of extra systoles. The respiratory system had been normal and no œdema of the ankles had been present. The specific gravity of the urine had been 1020 and it had contained a trace of albumin. The systolic blood pressure had been 120 millimetres of mercury and the diastolic pressure 80 millimetres. The uterus was the size of a six months' pregnancy and the position of the fœtus was right occipito-anterior. The inter-spinous measurement was twenty-five centimetres (ten inches), the inter-cristal measurement was twenty-six centimetres (ten and two-fifth inches) and the external conjugate was seventeen centimetres (six and four-fifth inches). Dr. Gibson said that the patient was being treated by the administration of "Benger's Food," milk foods and a diuretic mixture.

Contracted Pelvis.

Dr. Gibson also showed a woman, aged twenty-two years, a *multipara*, who had been admitted to hospital on July 17, 1924. The date of her last menstrual period was indefinite. At a previous pregnancy the patient had had Cæsarean section performed at eight and a half months. The puerperium had been normal. The patient had previously suffered from a "nervous breakdown." The patient's history on admission was that she had been in good health until the sixth month of the pregnancy and that she had then complained of pains in the back. She had been unable to determine the exact stage of pregnancy as her periods had been irregular subequent to the Cæsarean section. After examination on admission a diagnosis of a seven months' pregnancy had been made. The position was right occipito-anterior. She complained of pains in the back and side and urine contained pus and albumin. Dr. Gibson pointed out that the inter-spinal measurement was twenty centimetres (eight inches), the inter-cristal measurement was twenty-two centimetres (eight and four-fifth inches) and the external conjugate seventeen and a half centimetres (seven inches). The pelvis was of the generally contracted type. The patient was at term and Cæsarean section would be undertaken the following day.

Flat Pelvis.

Dr. Gibson also showed a woman, aged twenty-three years, a *primipara*, who had been admitted to hospital on July 12, 1924. Her last menstrual period had been from December 19 to 26, 1923. At three years of age the patient had suffered from infantile paralysis. The left leg had been paralysed and tendon transplantation had been carried out by Dr. Binnie. The right legt had been affected, but had recovered sufficiently and the patient had been able to walk. At the age of fifteen years the patient had been compelled to use a stick because the right leg became noticeably short. After this the patient had gradually become worse. After pregnancy occurred, the patient had felt well but had suffered from anorexia. The uterus was the size of a seven months' pregnancy and the fœtus occupied the right occipito-anterior position. The patient was pale and thin and examination of the chest revealed no abnormality. Both legs were very much wasted and talipes was present in both feet. There was lateral scoliosis at the sacrum and the coccyx was tilted. The inter-spinous measurement was twenty-two centimetres (eight and four-fifth inches), the inter-cristal measurement was twenty-six centimetres (ten and two-fifth inches) and the external conjugate was sixteen centimetres (six and two-fifth inches). Dr. Gibson said that the pelvis was of the flat type with an altered angle of inclination.

Twin Pregnancy: Albuminuria.

Dr. Gibson also showed a woman, aged thirty years, a *primipara*, who had been admitted to hospital on July 22, 1924. The patient's last menstrual period had been from November 5 to 8, 1923. The patient had suffered from pneumonia in 1919, but had had no other illnesses. The patient had been quite well until the day of admission, when she had come to the prematernity department. She had complained of slight pains in her back and albumin had been found in her urine. No abnormality had been found in her chest. Examination of the abdomen had revealed a large uterus. Palpation revealed a twin pregnancy. Both fœtus were presenting by the vertex. The heart sounds of two fœtus were audible. A trace of albumin was present in the urine. The systolic blood pressure was 150 millimetres of mercury and the diastolic pressure was 110 millimetres. The inter-spinous measurement was twenty-five centimetres (ten inches), the inter-cristal measurement was twenty-seven and a half centimetres (eleven inches) and the external conjugate was twenty centimetres (eight inches). Dr. Gibson said that on August 6, 1924, the patient had been taking milk foods and had been passing urine which contained "three-quarters" albumin. Fluids only had been given and four days later the albumin in the urine had been "a trace" only.

Pyelitis.

Dr. Gibson's next patient was a woman, aged twenty-eight years, a *multipara*, who had been admitted to hospital on July 26, 1924. She had had four children and her last menstrual period had been from December 2 to 5, 1923. Previous pregnancies had been normal throughout. She had had no previous illnesses. She had felt quite well except for pain in the back until July 26, 1924. Micturition had then become painful and frequent and pain in the back had been present. On admission it had been noted that she was pale and feverish, that her lips were dry, that she had tenderness over the bladder and kidneys and that the urine contained pus. The systolic blood pressure had been 110 millimetres of mercury and the diastolic pressure

70. Dr. Gibson pointed out that the uterus was the size of a seven months' pregnancy and that the fœtus was in the left occipito-anterior position. The pelvic measurements were as follows: Inter-spinous, twenty five and a half centimetres (ten and one-fifth inches); inter-cristal, twenty-eight centimetres (eleven and one-fifth inches); external conjugate, twenty and a half centimetres (eight and one-fifth inches). The patient was being treated by milk foods and the administration of potassium citrate and sodium bicarbonte every two hours. The bladder was being washed out with potassium permanganate solution and packs were being applied to the kidney region.

Eclampsia.

Dr. Gibson also showed a woman, aged thirty-six years, a *multipara*, who had been admitted to hospital on August 6, 1924. Her last menstrual period had occurred in December, 1923. Her previous pregnancies and confinements had been normal and there had been no previous illnesses. The patient had been apparently well until six hours before admission when the first fit occurred. On admission the patient had been semi-comatose with a temperature of 37.8° C. (100° F.) and a pulse rate of 100. The skin had been flushed and dry, the tongue thickly coated and no œdema had been present. Catheterization had yielded a small quantity of urine "solid with albumin." The patient had had five fits during the six hours before admission. The heart and lungs had been normal and the uterus the size of a nine months' pregnancy. The systolic blood pressure had been 185 millimetres of mercury and the diastolic pressure 105. The pelvic measurements were as follows: Inter-spinous, twenty-five centimetres (ten inches); inter-cristal, twenty-seven and a half centimetres (eleven inches); external conjugate, twenty centimetres (eight inches). The patient had had two fits within three hours of admission. Each fit had lasted for two minutes and had been characterized by tonic and clonic stages. On the third day after admission, labour had occurred and the patient had given birth to a living child. Treatment had consisted in washing out the stomach and bowel, in purgation, the application of packs to the kidney area and the administration of sodium bicarbonte solution by the mouth.

Contracted Pelvis.

Dr. J. R. MacCulloch showed a woman, aged twenty-two years, a *primipara*, whose last menstrual period had occurred on January 19, 1924. The probable date of her confinement was October 26, 1924. The external pelvic measurements were as follows: Inter-spinous, twenty-two and a half centimetres (nine inches); inter-cristal, twenty-two and a half centimetres (nine inches); external conjugate, fifteen and three-fifth centimetres (six and a quarter inches). The inter-trochanteric diameter was twenty-seven and a half centimetres (eleven inches) and the distance between the inner surfaces of the *tubera ischii* was six and a quarter centimetres (two and a half inches). No internal pelvic measurements had been made as the patient was unable to bear examination. Dr. MacCulloch pointed out that the various diameters were less than normal. As the inter-spinous and inter-cristal diameters were equal and the ilia were bulging, there was an abnormal curvature of the iliac crests. The external conjugate was only 15.6 centimetres (an antero-posterior contraction) and if 8.75 centimetres were deducted for the thickness of the bones and soft parts, the true conjugate was only 6.8 centimetres (two and three-quarter inches). The inter-cristal diameter was 22.5 centimetres and if this measurement was twice the transverse diameter of the brim, the transverse diameter was only 11.25. The transverse diameter of the outlet was also contracted. The inter-trochanteric measurement also indicated a degree of contraction of the transverse diameter of the outlet. Treatment would consist in Cæsarean section at term.

Eclampsia.

Dr. H. C. E. Donovan showed a woman, aged twenty-seven years, a *multipara*, who had been admitted to hospital on August 11, 1924. She had had four normal pregnancies and confinements. She had been quite well until the seventh month of pregnancy when her private medical attendant had discovered albuminuria. He had treated her until her admission to hospital. On admission she had been unable to see. Her skin had been of an earthy colour and her urine had contained much albumin. An hour after admission she had had a fit lasting for forty seconds and had been very cyanosed. Chloroform anæsthesia had been induced and the bowel and stomach had been washed out. Magnesium sulphate thirty grammes (one ounce), compound power of jalap twelve grammes (three drachms) and calomel 0.12 gramme (two grains) had been given by the stomach tube. The uterus had been the size of an eight months' pregnancy and the fœtus had been in the right occipito-anterior position. The patient had had no more fits, she had become quite sensible and ten hours later after normal labour had given birth to a living baby weighing 1.3 kilograms (three pounds). The child had since died.

Thrombosis.

Dr. John Morton showed a woman, aged thirty-seven years, a *multipara* who had been admitted to hospital on June 10, 1924. She had had seven children. All pregnancies and confinements had been normal. She had been operated upon two years previously for "abscess of the ovary" and cholecystitis. The patient had been quite well until two days before admission, when she had complained of pain in her right side. On admission the patient looked well, but tenderness had been present over the right kidney. No abnormality had been discovered on examination of the chest. The urine had contained pus and albumin. The uterus had been the size of a nine months' pregnancy and the fœtus had been in the right sacro-anterior position. The pelvic measurements had been as follows: Inter-spinous, twenty-five centimetres, (ten inches); inter-cristal, 27.5 centimetres (eleven inches); external conjugate, twenty centimetres (eight inches). A breech delivery had taken place on June 26, 1924, and the puerperium had been normal until the nineteenth day when the patient had complained of pain in the right leg. Some œdema of the leg and ankle had been present on the twenty-first day and the temperature had been 38.4°C. (101°F.) and the pulse rate 120 in the minute. Swelling had not been very extensive and on the day of demonstration it had subsided. The pain had also disappeared.

Mitral Stenosis Throughout Pregnancies.

Dr. Donovan also showed a woman, aged thirty-three years, a *multipara*, who had been admitted to hospital on July 29, 1924. The patient had had three children. The first delivery had been instrumental, the second by the breech and the third had been normal. During the puerperium after the first delivery the patient had been feverish, after the second delivery the patient had been in bed for a month, the third puerperium had been normal. The patient had had rheumatic fever twice, once when nineteen years of age and again when thirty years old. After the birth of the third baby the patient had spent some time in bed on account of her cardiac condition. After becoming pregnant again she had been fairly well until the seventh month and then had complained of breathlessness on exertion. She had then attended the pre-maternity department. On admission the patient had looked well, but had had a bright flush on the cheeks. She had not been obviously dyspnœic and no œdema had bene present. The apex beat had been in the fifth intercostal space. A pre-systolic thrill had been felt at the apex and a pre-systolic and systolic murmur had been heard at the mitral area. The second sound at the pulmonary area had been accentuated. No enlargement of the liver had been found and the lungs had been normal. The uterus had been the size of an eight and a half months' pregnancy and the fœtus was in the left occipito-anterior position. The patient was being treated by rest in bed.

Aortic Regurgitation.

Dr. Donovan also showed a woman, twenty-three years of age, who had been admitted to hospital on February 13, 1922. The patient had complained of shortness of breath on exertion for six years following pneumonia. She had come to hospital in order to find out the stage of her pregnancy. The patient when admitted had been pale and breathless and had had an obvious pulsation in the neck.

The apex beat in the fifth intercostal space had been of a heaving nature. A systolic murmur had been audible at the mitral area and a to and fro murmur at the aortic area. There had been no œdema. The uterus had been the size of an eight and a half months' pregnancy and the fœtus had been in the right occipito-anterior position. Fourteen days after admission Cæsarean section had been performed and at the same time the Fallopian tubes had been resected. The patient had made a good recovery and at the time of demonstration was comparatively well. The child lived and was healthy.

Hyperemesis Gravidarum.

Dr. Donovan also showed a woman, aged thirty-one, a *multipara*, whose last menstrual period had occurred in June, 1924. In three previous pregnancies she had suffered from severe vomiting, but had carried each child to term. Labour and puerperium in each instance had been normal. She had suffered from gastritis and jaundice seventeen years previously. The patient had suffered from vomiting since the beginning of pregnancy and had been in the Coast Hospital for three weeks. She had improved and on return to her own home had relapsed within twenty-four hours. On admission the patient had been thin and emaciated. The skin had been of a yellowish tinge and the patient had vomited frequently. The heart and lungs had been normal, the tongue dirty and the breath had suggested the presence of acidosis. Albuminuria had been present. Treatment had been carried out by purging the patient and by the administration of water and bicarbonate of soda by mouth. A 5% solution of glucose had been given by the rectum every four hours. Subsequently "Benger's Food" had been given and at the time of demonstration the patient was taking full diet.

Epilepsy Occurring After Labour.

Dr. Donovan also showed a woman, aged thirty-three years, a *multipara*, who had been admitted to hospital on July 13, 1924. Her last menstrual period had occurred in October, 1923. Her previous pregnancy and confinement had been normal. On admission the patient had been well, but during the first stage of labour she had vomited several times and had complained of headache. On examination "a trace" of albumin had been found in the urine, no œdema had been present. The systolic blood pressure had been 120 millimetres of mercury and the diastolic 80 millimetres. One hour after labour the patient had had a fit. On regaining consciousness the patient had stated that she had had no previous fits. The husband had confirmed this statement. During the following forty-eight hours the patient had had nine more fits, preceded by aura and accompanied by incontinence of urine. Some of the fits had lasted as long as eighteen minutes. The patient's stomach and bowel had been washed out, purgation had been used and kidney packs applied. Morphine and bromide of potassium had been given. Subsequently a history of fits in early childhood had been obtained from the patient's relatives.

MEDICO-POLITICAL.

ANNUAL MEETING OF THE DELEGATES OF THE AFFILIATED LOCAL ASSOCIATIONS OF MEMBERS WITH THE COUNCIL OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE annual meeting of the delegates of the affiliated local associations of members with the Council of the New South Wales Branch of the British Medical Association was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on October 3, 1924, DR. ANDREW DAVIDSON, the President, in the chair.

The following delegates were present: Dr. G. M. Barron (Northern Suburbs Medical Association), Dr. N. J. Dunlop (Central Northern Medical Association), Dr. J. English (Central Southern Medical Association), Dr. L. Fetherston (South-Eastern Medical Association), Dr. E. B. Fitzpatrick (Northern District Medical Association), Dr. A. Maitland Gledden (City Medical Association), Dr. E. M. Humphery (North-Eastern Medical Association), Dr. J. T. Paton (Western Medical Association), Dr. W. F. Simmons (Illawarra Suburbs Medical Association), Dr. E. H. M. Stephen (Western Suburbs Medical Association), Dr. F. G. N. Stephens (Eastern Suburbs Medical Association), Dr. R. W. Young (South Sydney Medical Association).

Dr. Maitland Gledden undertook to record the opinions of the Central Western Medical Association in the place of Dr. K. S. Macarthur Brown who was unable to attend on account of illness.

Friendly Society Lodge Practice.

DR. C. H. E. LAWES asked the meeting to consider a proposal to amend the Common Form of Agreement to render it part of the duty of the lodge secretaries to supply the lodge medical officers with the names of the lodges of all transferred members. It had been found that members of friendly society orders and other institutions that were not recognized by the Branch for medical benefit, were at times transferred to lodges of recognized friendly societies and the names of these members were placed on the medical officers' lists. The matter had been the subject of correspondence between the Council and the Friendly Societies' Association, but the latter had not entered into a discussion of the principle underlying the suggestion, namely that the medical officer of a lodge was entitled to the information concerning the name of the lodge and order from which each transferred member had been transferred. This was embodied in the Common Form of Agreement. The proposal before the meeting was that the lodge secretary should give this information. It would further, it was held, be desirable if information concerning the date when the member joined his lodge were given. Separate lists would be provided in respect of the beneficiaries under the arrangement with the Department of Repatriation. The members arrived at the conclusion that an amendment of the Common Form of Agreement would not be needed, but that the matter could be adjusted by appealing to the Friendly Societies' Association.

Publicity.

DR. R. W. YOUNG (South Sydney Medical Association) moved:

> That, as it is considered that the interests of the profession suffer for the lack of organized publicity, it be a recommendation to the Council that machinery be established to insure an active publicity movement.

Dr. Young referred to certain statements that had appeared in the daily newspapers and that conveyed an entirely erroneous impression concerning the action of the New South Wales Branch of the British Medical Association. The newspapers frequently made unjustifiable attacks on the Association and no refutation of the charges or innuendoes were published. His association would wish the Council to make arrangements for the publication at appropriate times of authoritative statements correcting these misstatements and also giving reliable information on the subject of the treatment of diseases for which alleged cures were vaunted. It was not desirable for individual medical practitioners to undertake the task of writing this form of article to the public press, even if the article were anonymous.

The motion was seconded by DR. W. F. SIMMONS.

DR. E. B. FITZPATRICK referred to an announcement that had recently appeared in a newspaper in connexion with a prosecution of a medical practitioner for having been intoxicated when driving a motor car. The public should have been told that the practitioner was not a member of the British Medical Association. Attacks on the profession should be met with the publication of the facts.

DR. E. H. M. STEPHEN thought that the Publicity Sub-Committee of the Medical Politics Committee should suffice to protect the interests of the profession.

It was pointed out that a few years ago this sub-committee had been appointed for the purpose of giving information to newspapers on medical matters of general scientific interest. Adequate machinery had been provided. Later the reference of the sub-committee had been extended and it had been empowered to reply to criticisims and misstatements in the lay press. It was only a matter of policy as to what kind of thing should be dealt with. But certain difficulties had arisen. On one occasion a letter

had been drafted in reply to a letter which had attacked the medical profession. The reply was a very good one. It had been considered carefully. The newspaper concerned had published part only of the letter, omitting parts that were essential for the proper presentation of the case, but did not suit the views of the newspaper. On another occasion a reply to a one-sided statement had been submitted to a leading newspaper, but this reply had not been published at all. In these circumstances the Council felt helpless. No machinery and policy could overcome the difficulty created by the unwillingness of some of the newspapers to publish communications correcting misstatements and meeting attacks.

DR. R. H. TODD referred to the fact that among the publications of the American Medical Association was a popular one known as *Hygeia*. It might be possible for the Australasian Medical Publishing Company, Limited, to publish a similar popular monthly magazine for general use in which information of a medico-political nature could be included. On the other hand it was difficult to devise a means of refuting charges of a personal nature.

DR. L. FETHERSTON suggested that it might be possible for THE MEDICAL JOURNAL OF AUSTRALIA to deal with these matters at the instance of the Council.

DR. YOUNG, with the permission of the meeting, withdrew his motion being satisfied with the information given.

DR. L. FETHERSTON then moved:

> That it be a recommendation to the Council from the Annual Meeting of Delegates that replies be inserted in THE MEDICAL JOURNAL OF AUSTRALIA refuting misstatements appearing in the public press derogatory to the profession when the Council deem it advisable.

The motion was seconded by DR. J. ENGLISH. The motion was carried.

National Health Insurance.

DR. W. F. SIMMONS (Illawarra Suburbs Medical Association) moved:

> That the policy of the New South Wales Branch of the British Medical Association on the question of national insurance be guided by the replies received to the *questionnaire*.

He pointed out that the number of practitioners who had replied to the *questionnaire* was disappointingly small. Many members had not taken the trouble to send in any reply at all. On the other hand those who had sent in replies, had expressed so definite an opinion that it was reasonable to accept this and act upon it. His association was desirous that the whole subject should be thoroughly discussed. As the Medical Politics Committee had a motion on the agenda paper, he would ask permission to withdraw the one standing in his name. Permission was given.

DR. C. H. E. LAWES moved on behalf of the Medical Politics Committee:

> That the proposal of the Federal Committee be considered as a basis on which a scheme for compulsory national health insurance acceptable to the medical profession and the people of the Commonwealth might be built up.

Dr. Lawes stated that the majority of members were opposed to the English scheme of national insurance. Many opposed all schemes. The Federal Committee of the British Medical Association in Australia wanted a constructive criticism and appealed to the Branches to make suggestions and to consider the proposals that had been made. It was understood that the Government had pledged itself to introduce some form of national insurance and they might take it that something would be done. The medical profession should have a workable scheme ready which would be acceptable throughout the Commonwealth. The Federal Committee had submitted the outline for such a scheme to the Branches. It was quite different from the English system and had none of the objectionable features of the latter. Dr. Lawes gave a short account of the Federal Committee's proposals and asked the meeting to accept it as the basis for a practical scheme of national health insurance.

DR. R. H. TODD said that the subject of medical benefit under a scheme of national health insurance was so big and complicated that it would be difficult to cover. He recommended the members to study the articles by Dr. Alfred Cox on "Seven Years of National Health Insurance in England" which had been reprinted in THE MEDICAL JOURNAL OF AUSTRALIA from *The Journal of the American Medical Association* with the sanction of the editor of that journal. Dr. Cox had also written a further article for THE MEDICAL JOURNAL OF AUSTRALIA. The discussion in the Section of Medical Sociology at the Annual Meeting of the British Medical Association at Bradford (see *The British Medical Journal*, August 2, 1924, page 167) was informative and had a bearing on the problems of national health insurance. The discussion was on the question whether the *National Health Insurance Act* had justified its existence. The panel doctors in England were undoubtedly satisfied with the change that had taken place in their practices as a result of the act. Apart from the defects which were being remedied, the financial and general position had improved. They had not the evils in Australia to overcome like those in England. It had been considered in America whether there was any need for legislation of this kind and they had come to the conclusion that there was not. There was no need to take a nauseous medicine to cure a disease that did not exist. There was no doubt that national health insurance was largely a political movement. It had proved an excellent vote-catching expedient and all parties had used it. It had been claimed that there was need for compulsory medical attendance and that it was the duty of the Government to provide it. No doubt it was the duty of the Government to prevent disease and to provide attendance on persons who would otherwise be a danger to the public health. For twelve years the Federal Committee had been endeavouring to bring about proper health measures in the community and to put public health on a proper basis. Nationalization of the doctors had been suggested in political circles and many medical practitioners were afraid of this. All thoughtful doctors saw that the medical profession had greater and wider responsibilities than they had had in the past. The Federal Committee had made a pronouncement on nationalization of the medical profession for the protection of the profession and the benefit of the community. This pronouncement had been printed in the New South Wales Branch Handbook. It dealt with the question of the fundamental principles underlying the relations between medical practitioners and the community and it protested against third party intervention between a doctor and his patient, save in special circumstances.

Dr. Todd referred to the report that had been drawn up by Dr. F. S. Hone and Dr. H. S. Newland, acting as a subcommittee of the Federal Committee, on the cooperation of the medical profession with the Federal Department of Health. This report was still under consideration and had not yet reached its final form. There were difficulties to be overcome in putting the proposals into action. The Federal Committee had been asked by the Royal Commission on National Insurance if it would give evidence on behalf of the British Medical Association in Australia. Evidence had been given in every State by members of the Branches and summaries of the evidence had been published in THE MEDICAL JOURNAL OF AUSTRALIA.

In regard to the poor response to the questionary the same obtained in the other States as obtained in New South Wales. Organized bodies seldom received replies to questions referred to their members from more than 30%. It was evident that the English system was not wanted in Australia and indeed no known scheme would be welcomed.

Dr. Todd dealt at some length with the position as placed before the Royal Commission by members of the profession and with the proposals that had been sent by the Federal Committee to the Branches for consideration.

DR. J. ENGLISH stated that his association was opposed to national health insurance altogether. He had noted that the Chairman of the Royal Commission had told Sir George Syme that they could not do without the medical profession. He realized that in England the Government had proceeded in spite of much opposition from the medical profession, but he did not think that there would be much dissension in the profession in Australia. He was prepared to support the Federal Committee's proposals, provided that satisfactory financial arrangements could be made and provided that the clerical work could be reduced to a minimum.

DR. J. T. PATON announced that his association held the view that there was no need for any insurance scheme in Australia. He objected to the submission of any scheme, in view of the fact that they opposed the system altogether. It would, perhaps, be wise to have a scheme ready, in case national insurance were forced on the medical profession, but they should not propose a definite scheme.

DR. E. H. M. STEPHEN opposed national health insurance of the British type. He was prepared to accept the scheme put forward by the Federal Committee if limited to those who were ineligible for membership of friendly societies.

DR. J. GOODWIN W. HILL said that the men in his district preferred the panel system to the system propounded by the Federal Committee. He advocated the declaration of the reasons why the profession disapproved of all forms of national health insurance. Anglo-Saxon people were best left to their own devices and resources. They needed a scheme planned to further preventive medicine and hygiene.

DR. F. G. N. STEPHENS held that the Association should be ready with a practical proposal when the question of the introduction became imminent. He thought that some of the details of the Federal Committees scheme were unworkable.

DR. W. F. SIMMONS expressed his disapproval of the British scheme of national health insurance. A workable scheme could be evolved on the lines suggested, provided that the insurance was not compulsory, that the clerical work was minimized, that the rates and conditions were periodically revised and that the friendly societies were incorporated in the scheme. He meant that the friendly societies should be taken over in their entirety.

DR. A. A. PALMER was opposed to national insurance. He did not think that it was inevitable. He held that it would be impossible to carry out the proposals of the Federal Committee.

DR. J. ADAM DICK maintained that national health insurance would probably be introduced and that it was essential for the profession to be prepared. In England they had not been prepared and the result had been disastrous at first. He was satisfied that defections would take place if they tried to oppose the introduction of one or other plan. The medical profession could not go back; they were practically pledged to do their best to construct a workable scheme. They had to avoid the defects of the English scheme.

DR. LAWES in closing the debate asked the members to approve of the Federal Committee's proposals as a basis for a scheme. Because the profession was opposed to national health insurance as it existed in England and elsewhere, it did not follow that they would be opposed to everything that might be devised.

DR. TODD also replied. The motion was amended by the insertion by way of a preamble of the words: "Although the meeting is opposed to any scheme of national insurance," and was carried without dissent.

Vote of Thanks.

A vote of thanks was carried to Dr. Andrew Davidson, for presiding. The PRESIDENT thanked the delegates for their attendance.

Births, Marriages and Deaths.

THE charge for inserting advertisements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps with the notice, not later than the first post on Tuesday, in order to insure insertion in the current issue.

BIRTH.

BYRNE.—September 1, 1924, at "Lakemba Cottage," Lakemba, New South Wales, to Dr. and Mrs. Kevin Byrne, a son.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xviii.

AUSTIN HOSPITAL FOR INCURABLES, HEIDELBERG, VICTORIA: Honorary Pathologist.

SYDNEY HOSPITAL: Clinical Assistant to the Ear, Nose and Throat Department.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

OCT. 21.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
OCT. 22.—Victorian Branch, B.M.A.: Council.
OCT. 24.—Queensland Branch, B.M.A.: Council.
OCT. 28.—New South Wales Branch, B.M.A.: Medical Politics Committee; Organization and Science Committee.
OCT. 30.—New South Wales Branch, B.M.A.: Branch.
OCT. 30.—South Australian Branch, B.M.A.: Branch.
NOV. 7.—Queensland Branch, B.M.A.: Branch.
NOV. 11.—New South Wales Branch, B.M.A.: Ethics Committee.
NOV. 12.—Tasmanian Branch, B.M.A.: Branch.
NOV. 12.—Victorian Branch, B.M.A.: Late date of Nomination of Council. Election of Scrutineers.
NOV. 12.—Central Northern Medical Association, New South Wales.
NOV. 12.—Melbourne Pædiatric Society.
NOV. 13.—New South Wales Branch, B.M.A.: Clinical Meeting.
NOV. 13.—Victorian Branch, B.M.A.: Council. Nomination by Victorian Branch of Representative of Group on Council, London.
NOV. 13.—South Australian Branch, B.M.A.: Council.
NOV. 13.—Brisbane Hospital for Sick Children. Clinical Meeting.
NOV. 14.—Queensland Branch, B.M.A.: Council.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, B.M.A. Building, 30-34, Elizabeth Street, Sydney. (Telephone: B. 4635.)

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance.